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AN ANALYSIS OF
CONFEDERATE SUBSISTENCE LOGISTICS

THESIS

Benjamin M. Washburn, IV
Captain, USAF

AFIT/GLM/LSR/89S-69

DEPARTMENT OF THE AIR FORCE
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Wright-Patterson Air Force Base, Ohio

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AFIT/GLM/LSR/89S-69

AN ANALYSIS OF CONFEDERATE SUBSISTENCE LOGISTICS

THESIS

Presented to the Faculty of the
School of Systems and Logistics
of the Air Force Institute of Technology
Air University

In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Logistics Management

Benjamin M. Washburn, IV, B.S.
Captain, USAF

September 1989

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Preface

The purpose of this research was to fill a long-standing gap in the historical analysis of the Civil War. Although firmly entrenched in military history as the first 'modern' or 'total' war, only recently has that war been studied from a modern perspective. For years, Civil War history has been written with the traditional emphasis on the battlefield. However, since most scholars feel that the war was decided, not on the battlefield, but by such intangibles as political philosophy, economic factors, or 'the national morale,' this emphasis has meant that some of the most informative aspects of the war have been neglected. From a contemporary perspective, one of the most important of these areas is logistics. Happily, this oversight has begun to be corrected in the last several decades; as yet, however, no full length treatments have been made of the Confederate subsistence efforts. It was to fill that void, and discover how the Confederate experience might contribute to a fuller understanding of the broad problems of logistics management, that this research was undertaken.

Naturally, many of the documents reviewed for this research are over 100 years old. Many of the usages common in the English language then are archaic now, so a brief note on the conventions used throughout this thesis will be of value. Spellings have been regularized, but old-fashioned usages have been preserved as indicative of the mindset of the people. For example, it was still common in

the South to use what we now consider to be the 'English' spellings of such words as 'centre', or 'theatre;' this usage reflects the identity Southerners of the period felt for the English people and social system. Punctuations have been preserved for the same logic. It was almost universal in the South to capitalize the word 'State;' this speaks volumes about the political orientation of Southerners.

Citations from the Official Record presented special difficulties. Its 139 volumes are categorized into Series, Volumes, and Parts, each of which is numbered individually. To avoid the clutter and distraction that inclusion of such minutia into the text would cause, I have cited each volume from which I have drawn quotations, with its appropriate Series, Volume and Part, as a separate entry in the Bibliography.

Underlining has been adopted to indicate publications or words of foreign extraction, in addition, I have used that device very sparingly to point out portions of a quotation that I felt was of particular relevance. In those few cases, I have indicated clearly that the alteration was my own. Finally, many of the documents consulted have been in the form of a reprint from government archives, in some of these cases italics have been used. To remain faithful to my sources, I have retained those italics, but have used them nowhere else.

It would be impossible for me to thank individually all the people that have encouraged me in this research. To

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each of them, however, family, friends, and faculty, I owe a large debt of gratitude and give a heartfelt thank you. But two people, whose contributions to this project have been at least as large as mine, deserve special acknowledgement.

Dr. Freda Stohrer, my thesis advisor, has provided outstanding guidance and advice throughout this year-long effort, and has turned what could have been a chore into a pleasure. She has directed my efforts throughout the research, and without her expertise the final product would only have said half as much, in twice the number of pages. I can only say 'thank you,' and express the hope that our project has been as enjoyable and informative for her as for myself.

Finally, to my wife Barbara, I owe special recognition. She has suffered with this project far more than I have - she has been mother, father, and wife for over a year, and has supported me not only in this thesis, but in all the tribulations of the AFIT curriculum. She has singlehandedly managed all the family logistics (not the least of which was my own considerable subsistence requirements) with far greater skill than the subjects of my study, and allowed me to devote my full effort to completing this project. It is to her, then, with great appreciation and love, that I dedicate this work.

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Abstract

The purpose of this study was to examine the policies and procedures devised by the Confederate States of America to provision its armed forces. In using the historical experience of the Confederates in logistics management, it was felt that fresh insight could be given to logistics problems of the present.

The method was essentially an inductive one. The specific procedures used by the Confederates, and the success or failure in which those procedures resulted, were examined to find their roots in pervasive principles of logistics management that are still valid today.

The Confederate experience was divided into three main areas in accordance with the United States Air Force definition of logistics. Those areas were 1) the production of food supplies, 2) the transportation system of the Confederacy, and 3) administrative procedures, both national and within the Subsistence Bureau, used to coordinate subsistence activities. It was found that the Confederates were able to produce adequate food supplies during the war, but that national coordination was lacking and the transportation system was incapable of handling distribution requirements of the size generated in the Civil War.

Many of the factors that mitigated against Confederate success in coordinating the subsistence effort remain valid

today. Recognition of logistics requirements, a single integrated approach to logistics needs, and a dependable transportation infrastructure are fundamental to effective logistics management.

AN ANALYSIS OF CONFEDERATE SUBSISTENCE LOGISTICS

I. Overview

Although recognition of the scientific nature of war has existed since Sun-Tzu wrote The Art of War around 100 B.C., the emergence of logistics as a separate, identifiable discipline distinct from strategy or tactics has occurred in only the last 150 years. As this nascent field begins to crystallize into a set of formal principles and management techniques, an examination of the origins of military logistics can provide valuable insight and perspective.

Specific Problem

The Confederate military experience in the American Civil War provides an excellent opportunity to study in microcosm a logistics system strained to the breaking point. An analysis of the Southern logistics effort, and the resulting effect on the Confederate war-making capability, can validate the emerging principles of logistics management. Even a cursory examination of the Confederacy poses an interesting paradox: how could the agricultural South be successful in providing the manufactured goods and munitions its armies required, and yet fail to feed its men with the basic foodstuffs apparently so abundant within its borders? How could a nation of farmers starve?

Investigative Questions

The research required in this area naturally falls into the three general areas of agricultural production, transportation, and administration.

Agricultural Production. Was Southern agricultural production during the war years sufficient to meet the demands placed on it by a protracted war? While it is true that the Southern economy was primarily agricultural, what proportion of agricultural production was devoted to large-scale commercial operations that went beyond simple subsistence farming unable to support field operations? How much commercial production was devoted to food crops, as opposed to cash crops such as cotton, hemp, or sugar? Did the effects of the war itself, through redirection of manpower into the army, for example, or Union occupation of agricultural centers, erode agricultural capacity?

Transportation. Was the South able to transport and distribute its agricultural production appropriately? A fundamental component of wartime distribution is the state of its transportation infrastructure. How well were the Confederacy's roads, bridges, ports, and railroads able to handle the strain of supporting a war-time economy? How did the South, with its limited industrial capacity, provide for the repair and maintenance of its transportation system?

Administration. Was the Confederacy able to develop and maintain an effective administrative organization to

manage the area of subsistence logistics? Once the logistics resources available to the Confederate authorities have been analyzed and quantified, it remains to examine the effectiveness of the management of those logistics assets. Here, one must examine and evaluate the effectiveness of the Commissary, or Subsistence, Bureau of the Confederate War Department in procuring and distributing provisions throughout the Confederacy. This research should focus on both the internal administration and efficiency of these organizations, and the individual strengths and weaknesses of the men directing the bureaus.

Overlaying the three specific areas of research is a broader question concerning the degree to which the Confederate authorities provided the financial and institutional support necessary to sustain the subsistence logistics organization in its attempt to promulgate effective policies and procedures to handle the problems encountered in each of the three individual areas of analysis.

Justification for Research

In the present period of constrained military budgets, a question of immediate interest involves the allocation of scarce military resources between the logistical (or support), and combat, (or operational), components of our military machine. In making this crucial determination, the great difficulty is in finding the proper balance between

the two spheres. Too much operational capability with insufficient logistical support results in a hollow force incapable of sustaining military power. Conversely, dedication of disproportional assets to logistical functions results in a bloated military with no cutting edge. The necessity for an ideal allocation of resources extends beyond a narrow military perspective, and should include an assessment of societal priorities in assigning economic assets. As Paul Kennedy explains in his study of the rise and fall of the great powers:

Wealth is usually needed to underpin military power, and military power is usually needed to acquire and protect wealth. If, however, too large a proportion of the state's resources is diverted from wealth creation and allocated instead to military purposes, then that is likely to lead to a weakening of national power over the longer term.
(33:XVI)

This is nothing more than the old economic 'guns vs butter' debate restated, the importance of which may be seen in recent Soviet attempts to restructure their society to provide a sounder basis for long-term economic strength.

The difficulty in making these determinations comes in peacetime, when there is no objective reference against which to measure the results of the allocations made. As the old proverb reminds us, 'a chain breaks first at its weakest link,' and it is only in times of war, when the military and socioeconomic units are strained to the breaking point, that weakest link can be identified.

Unfortunately for politicians and military strategists, the finality of war is such that this experiment may be conducted only once - if the bottom line provided by the stress of warfare reveals that inappropriate or inefficient priorities have been set, there is usually no opportunity for reconsideration.

Such decisions, however, need be made in a vacuum. History is a laboratory that furnishes numerous experiments in military management; to restate Santayana's overworked observation, to ignore the examples provided in that laboratory is to be condemned to repeat those experiments endlessly. On the other hand, if the data those experiments provide are studied, not for the incidental details peculiar to the individual situation, but for the broad principles that can be derived from the details and remain viable over time, then decisions concerning logistics priorities, organization, and management can be made on a more informed basis. A study of the Southern Confederacy is especially informative in this regard, as it is a textbook example of a belligerent that discovered its breaking point in an outmoded approach to logistics management when confronted with what has been termed the first modern, or total, war (26:112-113).

For example, the various railroad gauges that hampered the Confederate distribution system may at first glance seem to be an example of an archaic and parochial approach to war, until one remembers that our allies in Europe use the

metric system for their military hardware, while we still use the English system. European small arms use a 9 millimeter bullet, while we use a .45 caliber bullet. The larger issue of standardization of resources remains, even though our railroad gauges have long since been standardized. An examination of Jefferson Davis' influence on military affairs, and the resulting lack of smooth coordination between the Confederate administrative and military chains of command, may at first seem to be trivial piece of arcane scholarship into backroom politics, until one remembers that the Department of Defense (DOD) Reorganization Act of 1986 was intended to correct just such vagaries within our own military organization. The issue of coordinating independent chains of command remains, even though the Confederate War Department, and the individuals within it, have long since passed into the realm of history.

Of course, the real issue is much larger than simply standardization of resources or the President's role in military management. Any Confederate in 1861 could have predicted, and many did, that non-standard railroad gauges or a lack of unity in the War Department would severely jeopardize the war effort. The larger issue lies not in the discovery of the problems, but the nature of the Confederate attempt to prevent or resolve them. What factors led to the peculiar circumstances in which the Confederacy found itself, and what institutional policies, procedures, or

structures would have prevented those circumstances, or could have solved them if properly applied? How did the Confederates make the critical allocation of resources between combat power and logistics support? How does the application, or lack of application, of effective policies by the Confederate administration, illuminate the problems of integrated logistics management faced by the military today?

Methodology

The Logical Argument. The method of this thesis, then, is an inductive one. From a study of the particular environment in which the Confederacy operated, the specific policies and procedures it employed in an effort to solve its own logistics problems, generalized observations have been derived that help in understanding and evaluating the options available to the military today as it attempts the same balancing act between support and operations. The general observations derived inductively from historical facts and circumstances can then be applied by military policy-makers in a deductive manner to contemporary problems and concerns. It is important in military operations to develop state-of-the-art hardware and efficient management techniques; but it is just as important that they be applied with an awareness of the larger context within which they will operate. As President Bush has observed, to strive merely for technical competence is "a narrow ideal. It

makes the trains run on time, but doesn't know where they are going" (60:14).

The United States Air Force has described logistics as:

... the principle of sustaining both man and machine in combat by obtaining, moving, and maintaining warfighting potential. Success in warfare depends on getting sufficient men and machines in the right position at the right time. This requires that a simple, secure, and flexible logistics system be an integral part of an air operation. Regardless of the scope and nature of a military operation, logistics is one principle that must always be given attention. (14:2-6)

The Air Force definition has focused on three aspects of the logistics problem; the "obtaining, moving, and maintaining", of logistics potential. After a brief introduction to introduce readers to some of the background factors, such as material resources and the political milieu within which the Confederacy operated, the thesis will treat the Confederate subsistence logistics effort from the same perspective.

The first section will deal with "obtaining" the food necessary to maintain the armies in the field. In that chapter, agricultural problems, policies, and output quantities will be considered to determine the effectiveness of the Confederacy on producing adequate supplies of provisions to support the war effort. The next section will analyze the Southern transportation network, and the effectiveness of the Confederates in relocating provisions from producing regions to the fighting front. Necessarily,

the main topic of that chapter will be the railroads; how their capacity, maintenance, and management affected the Confederate subsistence effort. In addition, the role of shipping and blockade running in meeting the provisioning needs of the Confederacy will be considered. The final of the three research oriented chapter will examine the administrative procedures used by the Confederates to maintain its subsistence effort during the war. The primary focus of that chapter will be the policies and administration of the Subsistence Bureau. In addition, the impact of the Confederate chain of command and Confederate politics on the Subsistence Bureau and the War Department will be reviewed for their affect on provisioning. The thesis will close with an overall analysis of the Confederate subsistence effort. The success of the Confederates in achieving a maximum mobilization of their subsistence resources, the effect of the subsistence effort on the warmaking power of the military, and the general conclusions that can be drawn from that analysis, will be presented.

The Research Process. The physical process of researching an historical thesis in an area where all the participants have long since died is straightforward: read everything possible relating to the subject, consider the material from the perspective of the research and investigative questions, and present the conclusions drawn in a logical format designed to answer the specific thesis

question. Though straightforward, this task is by no means simple in a field so abundant in both primary and secondary source material as the Civil War. Accordingly, a summary of the scope and nature of my research will be of value, as well as present a summary of the process by which research proceeded. Although this thesis discusses primary sources first, it should be understood by the reader that, in general, I first reviewed secondary sources, and then moved on to the cited primary sources for verification and more complete detail.

A prerequisite for any historical research is a thorough understanding of the context within which the topic in question occurred. The Civil War, by Bruce Catton, is a good single-volume review of the political and social issues leading to the Civil War, as well as balanced coverage of the course of the war and the military policies that shaped that course. For more detail, as well as an outstanding bibliography, the trilogy The Civil War: A Narrative by Shelby Foote is an excellent reference.

Primary Source Material. The Civil War historian can only plead guilty to an embarrassment of riches in terms of primary sources, although these are never distributed in precisely the areas one would like. Any research into the Civil War, however, requires a firm grounding in the 128-volume War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies, compiled and

issued in four series by the United States government from 1880 to 1901. This is a collection of every official document, memo, or hurriedly scribbled battlefield note to survive the war, and gathers together materials from the national and state governments as well as the armies.

In particular, Series Four of the Official Records was of prime importance. Entitled Confederate Correspondence, these three volumes contain the documentary history of the Confederate government and administrative authorities. Hundreds of communications between Subsistence Bureau officials, purchasing agents, state authorities, and other Confederate administrative and political figures are preserved here. There you hear the participants speak first hand, and the story they tell on-the-spot is not always the same one they told in their reminiscences and correspondence written after the war, when advancing age and partisan motivations had a way of obscuring memories. Used with caution, however, these recollections help capture the aura of the period as they describe and analyze the great events and people of the time.

For example, Jefferson Davis' The Rise and Fall of the Confederate Government gives an excellent account of the political philosophy and workings of the inner circle of the Confederate administration from the unique perspective of the only President of the Confederacy, but written fifteen years after the events it describes, the book was primarily intended to justify on Constitutional grounds the secession

of the Southern states. It can hardly be relied upon to provide an unbiased appraisal of the effectiveness of the Davis administration in mobilizing or coordinating the Confederate war effort. An assessment of the Confederate government by a knowledgeable observer outside the administration can be found in either The Lost Cause, or Southern History of the War, both by Edward Pollard. As the editor of the Richmond Examiner during the war, Pollard was well situated to monitor the activities and policies of the government, and his caustic criticism of the Confederate government and its conduct of the war reveals that Southerners were not united in their ideas on how to approach the demands of total war.

Diaries or memoirs of the major individuals concerned with Confederate logistics and war administration were of special significance. There are two such diaries that provide outstanding personal views into the inner deliberations of the Confederate War Department. A Rebel War Clerk's Diary, by John . Jones, has earned its author the title 'the Pepys of the Confederacy.' As a clerk in the War Department, working directly under the Secretary of War, Jones observed the personal strengths and weaknesses of men crucial to the Confederate supply effort, while at the same time, he records the effects of the war on the civilian population of the city. Inside the Confederate Government: The Diary of Robert Garlick Kean, while neither as full nor

as gossipy as Jones' diary, provides fuller detail into the background factors, constraints, and opportunities as they were viewed at the highest levels of the Confederate administration. As head of the Bureau of War, the administrative division of the War Department, Kean was better situated to view the innermost workings of the Department on a daily basis. Kean's second service to history outweighs the contribution made by his excellent diary.

In their haste to leave Richmond before Federal troops arrived at the end of the war, some Confederate officials suggested destroying the Confederate war records to speed their flight. To this Kean vigorously objected, foreseeing that the documents could become necessary to protect Confederate authorities from untruthful charges that might be brought against them in the period of harsh reconstruction he saw coming. He personally packed and preserved the records that were to become the basis for Series Four of the Official Record.

Secondary Source Material. Secondary sources are almost overly plentiful, and the researcher's primary problem is to 'separate the wheat from the chaff.' A discussion of the procedure the author followed to identify and locate the appropriate materials follows.

The most useful method of finding books and periodicals was through the bibliographies, footnotes, and references of already located materials. This search

proceeded from the general to the specific, focusing on terms and people instrumental to the areas discussed in the investigative questions. Naturally, these investigations often led to additional primary sources. The numerous indexes and abstracts published on a continuing basis provided another important source of secondary materials. Two of the most important abstracts are Historical Abstracts and America: History and Life. The key scholarly journals in the area of Civil War history are the American Historical Review (formerly the Mississippi Valley Historical Review) and Civil War Times. These have been reviewed issue-by-issue back to their inceptions for articles and for leads to other material. The Civil War Times, for example, publishes an annual index of all Civil War related articles and books published during the year.

Two points need to be made about this review of secondary sources. The first is that it was an iterative process; as new directions and considerations were uncovered, the journals and abstracts were referred to repeatedly for additional information in the new areas. Second, the Civil War centennial in the 1960's precipitated an explosion of new information. Research into periodicals and abstracts from that period was especially fruitful. The detached perspective brought by the passage of 100 years enabled historians to reevaluate the accepted canons of belief that had previously dominated Civil War

historiography and to present a fresh appraisal of the supply efforts of the Confederacy. Although there are now full length treatments of the Quartermaster and Ordnance Bureaus of the Confederate War Department, no such detailed examinations into the efforts of the Subsistence Bureau exist as yet. This thesis is a first step towards filling that gap, and was accomplished to provide additional insight into the logistics problems faced by military planners today.

II. Resource Analysis and the Impact of Southern Culture

Overview

To evaluate the effectiveness of the Confederate civil and military subsistence apparatus accurately, one must first thoroughly understand the environment in which the system operated. The problems posed by military logistics in the 19th century differed considerably from those of the 20th century, and the unusual situation in which the Confederacy found itself with the outbreak of the war in 1861 played a large part in determining the direction subsequent events were to follow. Two points of particular relevance to the ability of the South to produce and distribute adequate quantities of foodstuffs to its military and civilian populations were: 1) Its economic and agricultural infrastructure, and 2) The political climate from which the Confederacy evolved.

Economic and Agricultural Infrastructure

First Steps. With the secession of the first seven Southern states in early 1861, Southern leaders were faced with the task of creating the administrative apparatus of a country, organizing and raising an army, and holding elections of public officials, all while under threat of invasion from the United States. The myriad of details, important and trivial, seemed overwhelming. They had to name their new 'Cotton Kingdom,' organize a postal service,

set up customhouses and arsenals, define borders, and set up procedures for handling the complex matters of finance, taxation, diplomacy and national defense (15:76).

To most outside observers, Confederate prospects appeared dim. Caleb Cushing, formerly Attorney General under Franklin Pierce, was asked what chance he thought the South had. Cushing's reply fairly summed up the logistics situation for the South:

What chance can it have? The money is all in the North; the manufactories are all in the North; the ships are all in the North; the arms and arsenals are all in the North; the arsenals of Europe are within ten days of New York, and they will be open to the United States Government and closed to the South; and the Southern ports will be blockaded. What possible chance can the South have? (44:5)

Manpower Resources. Statistics were against the Southern war effort: in wealth, the ratio was 1 to 4.5; in real and personal property (excluding slaves) it was 1 to 6; in manufacturing it was 1 to 10 (44:5). The manpower disparity is more difficult to evaluate, depending on how the analyst considers the extensive Southern slave population. Direct population statistics are misleading. The Union states had a population of about 23,000,000 in 1860, as opposed to some 9,000,000 in the seceding states. Of this nine million, about 3.5 million were slaves. At the outset of the war this represented an advantage for the Confederacy as their labor enabled her to more completely mobilize all Southern white males. As the war dragged on,

however, this asset wasted away as Northern armies advanced and slaves fled to freedom within their lines. Eventually, the large slave population proved a burden as significant numbers of troops had to be withdrawn from the fighting front to guard against fears of Negro insurrection, the Southern 'bogey-man' of the period (63:129-130, 18:88).

Extensive disloyalty during the war also make population figures less meaningful. The entire western third of Virginia refused to follow the rest of the state into secession from the national government. Instead, the western counties 'seceded' from Virginia, formed their own state, West Virginia, and remained in the Union. Similarly, the border states of Maryland, Delaware, Kentucky, and Missouri, while nominally Union, supplied significant numbers of men to the Southern war effort (21:52-54,128).

These considerations balanced out to a rough three-to-one manpower advantage for the Union; however, wars are not decided by statistics. The nature of the war equalized the odds somewhat. Because the South was pursuing a defensive strategy, and was fighting within its own territory, a much larger proportion of its troops could be dedicated directly to the fighting front rather than to maintaining long supply lines and holding captured enemy territory (25:136). As the Union forces advanced deeper into the South, large percentages of its numerical advantage were drained away to hold important supply depots, communication links, and railway junctions secure against both Confederate raids and

civilian guerrilla activity. By the final campaigns of the war, General Grant estimated that at least half, and probably more, of the soldiers in the Union armies were not in the main field armies but in some kind of garrison or occupation duty and therefore not available for service with the armies' cutting edge (63:130).

The upshot is that most historians agree that the manpower advantage of the North was not decisive in and of itself; with proper management the Confederacy could, and in fact, did field adequate numbers of troops to accomplish its military objectives. The war would be decided by the South's ability to marshal all its economic resources to support a sustained military effort in the field, without debilitating the economic base out of which military power must flow (33:178-182).

The Economic Base.

We send our cotton to Manchester and Lowell, our sugar to New York refineries, our hides to down-east tanneries and our children to Yankee colleges, and we are ever ready to find fault with the North because it lives by our folly. We want home manufactures, and these we must have, if we are ever to be independent. (58:79)

The true disadvantage of the South was the state of its antebellum economy. Still overwhelmingly rural, the South lacked the financial and industrial infrastructure of the North. Factory production of the slave states ranged from 8 to 13 percent of the free states output of crude and bar

iron, coal, clothing, cotton sheeting, woolen products, and shoes(23:3-4). At the outbreak of the war there were approximately 22,000 miles of railroad line in the North and only 9,000 miles in the South. In addition, the North was able to add 4,000 miles of track connecting strategic locations during the war, the South was able to construct barely 200 (2:42).

After railroads, the next great bulk transportation medium in the 19th century was shipping. Here, if anywhere, the South lagged even further behind. Port facilities in the South were excellent, a testament to the importance of the overseas cotton trade to the Southern economy, but few Southerners were actually sailors. In 1858 tonnage built in the North was five times that built in the South, and by 1860, 80 percent of American capacity was owned by Northern shippers (44:10).

The situation was even worse than these examples indicate because of the sharp disparity in economic development between the 'cotton states' of the deep South and the more developed upper South. Transportation and communication in the deep South were 'uncoordinated patchworks' that would offer little support to a sustained military effort. Industry consisted of a few cotton factories in Georgia, some clothing and shoe shops in New Orleans, and little else.

Though heavily agricultural, the region produced little in the way of military provisions prior to the war. The

vast majority of agricultural output prior to the war was in the cash crops of cotton and sugarcane. There was some corn, sweet potatoes, rice, peas and beans, but these were highly perishable and of little use to armies defending the borders as the transportation system to the upper South was highly undependable (22:14-27).

In contrast, the upper South was a land of grains, meat, and even some heavy industry. The agriculture of the upper South had diversified from the old dependence on tobacco - the traditional cash crop. Progressive farming techniques employing imported guano from South America, contour plowing and terracing, and farming machinery had resulted in what one scholar has called the 'Renaissance of the Upper South' (17:177-195). One third of the wheat grown in the United States came from this area, plus oats, rye, barley and plenty of corn. The ratio of hogs (the main Southern meat animal) to humans was double that of the North; most of these were raised in Kentucky, Tennessee, Maryland, and Virginia (29:213-215). Over 90 percent of the South's pig iron, salt, and coal was produced here. Further, close proximity to the fighting front and lines of transportation made this output accessible where it was most needed (23:5).

The advantage of proximity to the fighting front was a double-edged sword, however. In 1860 a Southern economic map would have resembled an eggshell, with the bulk of the

important military logistics assets located along the exposed Northern edges of the South. Unfortunately for the South, the eggshell developed some major cracks as the Confederacy crystallized into its final shape. The failure of the secessionists to carry Missouri, Kentucky, and Maryland into the Confederacy was a major disaster for the Southern war effort. This single factor accounted for the loss of one third of the grains and animals of the slave states and over one half of what little industrial capacity the South possessed. Even worse, nearly all of the significant iron mills, saltworks, coal mines, flour mills, grain fields, and slaughterhouses were now within 150 miles of the Northern border. Any territorial losses at all could result in economic devastation for the Southern Confederacy (23:4-5).

The overall picture that emerges from a study of the antebellum economy of the South is a contrast of strengths and weaknesses. True, the bulk of heavy manufacturing was in the North, but the South did have adequate deposits of all the raw materials necessary for war in the 19th century, except for mercury and sulfur. Fortunately, the sugar-makers of Louisiana had stockpiled an adequate supply of sulfur (for refining), and the requirement for mercury was small enough that blockade runners were able to meet the demand. Virginia had been the country's leading producer of coal and iron in the 18th century, and in 1860 was still holding its own in a market dominated by Pennsylvania's

cheaper but inferior anthracite smelted metal. In Alabama there were thick seams of coking coal and large deposits of iron virtually unused, but available for exploitation. The Appalachian areas produced significant quantities of copper, lead, zinc, and manganese. Until the California gold rush, North Carolina and Georgia had produced most of the nation's gold (44:5-7).

The Agricultural Base. Agriculturally the situation was even brighter. The rich alluvial soil of Mississippi, Alabama, and Louisiana was some of the most fertile in the United States. Although antebellum output was dominated by the cash crops of tobacco, cotton, and sugarcane, the large cultivated areas of the deep South represented great potential for conversion to major food crops for the armies. Even before conversion the South was producing quantities of provisions almost equal to the Northern and Midwestern states. The following table shows the per capita production in bushels of the most important produce in 1860.

PRODUCT	NORTH	SOUTH
Wheat	5.57	4.78
Corn	25.55	31.05
Oats	7.03	2.18
Rye	.87	.24
Rice	----	.35
Potatoes (white and sweet)	5.97	4.35
(61:154-156)		

In addition to the large supply of hogs along the northern fringe of the Confederacy, there were great supplies of cattle. As with hogs, the South boasted a 1.5 ratio of cattle to humans, as opposed to the .66 ratio in the North. And almost all of the Southern cattle were beef cattle; in the North, 35% of the livestock was kept for dairy farming. Since dairy cattle did not go to the slaughterhouse until they were seven years old, whereas beef cattle were processed when they were three years old, the South could expect an even larger return from their livestock than the figures would indicate (22:6-7).

But for every silver lining there was a dark cloud hanging ominously overhead. Most Southern foodstuffs were produced by subsistence farmers; the large plantations almost exclusively planted cash crops. As the yeoman farmer was drawn away from his fields and into the army, he would become a consumer rather than a producer; at once demand for food would increase as food production decreased. And while as a whole the prewar South was about self-sufficient in food production for its people, the livestock rich upper South was heavily dependent on imports from the Midwestern states down the Mississippi of feed grains and forage for its hogs and cattle (24, Vol 2:812).

The more scientific aspects of animal husbandry were not as widespread as in those states north of the Mason-Dixon line. As a result, and because food grains were not as available in the deeper South, Southern livestock did not

reach the size and quality of animals from granary states such as Ohio (24, Vol 2:831-857). Southern hogs were described by one Ohio soldier as the "longest, lankiest, boniest animals in creation." The majority of Southern cattle were located in far-away Texas, and were "poor even by Southern standards . . . were largely semi-wild and probably worth only one-half as much as animals in other Southern states." Nevertheless, they were there, and even in their scrawny state provided 400 to 600 pounds of beef per head (22:7).

So the picture for the Southern Confederacy was one of contrasts. The raw materials for war were available and agricultural potential was sufficient to support anticipated wartime demand. If cash crops could be converted to foodstuffs, If slave labor could ameliorate the drawing of the farmers into the armies, If the armies could protect the vital fringes of the Confederacy, If 'King Cotton' could provide a stable international currency, If homegrown industries could spring up to manufacture what was formerly imported from the North; there were hundreds of 'If's' facing Southern leaders in 1861. None were insurmountable; what was needed was an efficient wartime mobilization of all of the South's resources. What was needed, although the phrase would have been foreign to military thinkers in the middle of the 19th century, was a plan for the integrated management of Southern military and civilian logistics. It

was here that the South ultimately fell short, and the implications of that failure were largest in the subsistence arena.

Historian David Sabine concluded his study of the resources of the two belligerents by noting that although the South had the material to accomplish her limited military objectives, "the South failed to develop the managerial capacity required for an industrial society. Her greatest weakness lay in the lack of ability to transform raw materials into finished goods. Leadership failed. An esprit de corps never developed, especially in her civil organization, and she never made full use of either the human or material resources she had. In the North, civil leaders exceeded the military men in ability, particularly at first; whereas in the South, military leadership was far more able than the civil throughout the war" (44:13).

By the end of the war it had become obvious that a concerted effort under a strong central authority was what had been lacking in the Southern war effort. In December of 1864 a cabinet member summed up to the Confederate Secretary of War his analysis of the underlying Confederate problem:

I do not elaborate this point but briefly state, that if all Government agents were ruled by comprehensive principles, & a single eye to the general weal, and not influenced by special interests or inclinations ... in other words, if the War Dept. could be a centre of unity, & if the Govt could be a unit, the theory of the regulations would be universally applicable. (27:17)

But what was obvious at the end of the war was less so at its inception, and in the South there were formidable political and social traditions that hampered developments along these lines for the duration of the war.

States Rights and the Southern Political Tradition

Where must the American citizen look for the security of the rights with which he has been endowed by his Creator? To his State government. Where shall he look to find security and protection for his life, security and protection for his personal liberty, security and protection for his property, security and protection for his safety and happiness? Only to his state government. ... What, then is the Government of the United States? It is an organization of a few years' duration. It might cease to exist, and yet the States and the people continue prosperous, peaceful, and happy. (13:451-452)

Historical Background. Fifteen years after the resolution of the Civil War, Jefferson Davis penned these words summing up the Southern attitude towards the national government. But the tradition of states' rights in the South was not a simple excuse for rebellion dreamed up after the fact to justify Southern secession. Instead, it grew out of events leading up to the war, and was the political manifestation of the peculiarities of the Southern character and cultural experience. An anonymous South Carolinian echoed the sentiments of most Southerners when he said, "I'll give you my notion of things. I go first for Greenville, then for Greenville District, then for the up-country, then for South Carolina, then for the South, then

for the United States, and after that I don't go for anything. I've no use for Englishmen, Turks, and Chinese" (58:8-9) The vaunted Southern emphasis on individualism and the localism inherent in the South's traditional folk culture was best expressed by W. J. Cash in his examination of the Southern temperament:

Allow what you will for esprit de corps, for this or for that, the thing that sent him swinging up the slope at Gettysburg on that celebrated, gallant afternoon was before all else nothing more or less than the thing which elsewhere accounted for his violence - was nothing more or less than his conviction, the conviction of every farmer among what was essentially only a band of farmers, that nothing living could cross him and get away with it. (5:44)

The average 19th century Southerner saw his state as the ultimate guarantor individual liberty and prosperity. The Constitution had been in existence only thirty or forty years for the Southerner born and raised in the first half of the century. Before that, his home state had been a member to the Articles of Confederation, and before that, an individual segment of the British Empire. As the above quotation from Davis shows, the Southerner considered the national government almost as a transient political expedient, to be tolerated as long as it might prove beneficial, but capable of being revised or discarded as events proved necessary, just as his father had done with England in the Declaration of Independence.

Most Southerners in 1850 no more considered their primary allegiance as lying with the United States than would the typical European (or American) today see his primary loyalty as being due to the United Nations or the North Atlantic Treaty Organization (NATO), although the latter organizations have been in existence almost as long as had the United States at that time. The Europe of the 1990's is a good model of the Southern conception of the ideal political organization: organized for common defense under NATO, collective economic interests organized under the European Economic Community (EEC), but with neither body possessing the power to interfere with the internal affairs of the independent member countries. It was just such perceived 'meddling' by the United States government with the internal affairs of the sovereign states that led eventually led to Southern secession, and it was resistance to similar intrusion by the Confederate government that prevented the national authorities from ever effecting a complete mobilization of the South's military resources.

Sectional espousal of states' rights as a weapon against the domineering tendencies of the national government did not originate exclusively in the South. Personified respectively by Thomas Jefferson and Alexander Hamilton, the ideological battle for primacy between the state and national governments was the dominant theme of early United States history, the fallout of which included the great American political documents. The Federalist

Papers, for example, are a Hamiltonian political manifesto urging formation of a powerful national government, while the Bill of Rights preserve the Jeffersonian fear of unconstrained central authority. In the Hartford Convention of 1814, it was New Englanders' who first proposed Constitutional amendments, and even considered secession, to protect themselves from what they believed was the undue influence of the South and West over the policies of the national government (12:216-7).

As the growing population of the Northern and Midwestern states manifested itself in the gradual shift of political power away from the South, however, Southern leaders adopted and refined states' rights to fortify themselves against felt Northern mercantile and social interference with the South. Formally codified by John C. Calhoun in the theory of 'nullification,' which would have given individual states the power to void any national laws they viewed as against their best interests, the theory continued to evolve as one Southern response to the sectional controversies of the 1830's, 40's, and 50's over economic and slavery issues. By 1860, the doctrine had become so deeply ingrained into the Southern psyche that it had transformed itself from a political theory to a doctrine of faith (59:32). Although the outcome of the Civil War put a de facto end to that kind of thinking forever, for the

average Southerner on the eve of the war the concept of state sovereignty was very real.

The role of states' rights in the Southern Confederacy has received much scholarly debate. Many historians, looking for a single explanation for the South's defeat in the Civil war, have laid the blame on an excessive zeal in following the doctrine to its logical extremes.

States Rights' During the War. Frank Owsley, in the introduction of his book State Rights in the Confederacy claimed

There is an old saying that the seeds of death are sown at our birth. This was true of the southern Confederacy, and the seeds of death were state rights. The principle on which the South based its actions before 1861 and on which it hoped to base its future government was its chief weakness. If a monument is ever erected as a symbolical gravestone over the "lost cause" it should have engraved upon it these words: "Died of State Rights." (39:1)

Owsley's thesis was that adherence to states rights killed the Confederacy by limiting the cooperation and support given by the individual states to the central Confederate government. When the war broke out, for example, the states had captured over 350,000 small arms from various arsenals within their boundaries (39:272). But since they kept them for local defense, rather than forwarding them to the Confederate authorities as requested, the army had to reject 200,000 troops for lack of arms. He cites North Carolina hoarding 92,000 uniforms in-state when

Lee's ragged army surrendered as an example of state sovereignty pursued to a self-defeating degree (39:276).

A major contributing factor to the disunity suffered by the Confederacy was that the Confederate Constitution made no provision for a national Supreme Court. As a result, no authoritative body existed to clearly delineate the lines of authority and responsibility between the state and national governments (59:195). The lack of central authority repeatedly undermined Confederate attempts at a unified and coordinated national response to the demands of the war. When the national government passed a law - the Conscription Act, for example - that the various states felt was an infringement of their rights, they would simply ignore it (39:211-212). More often, the legislature, composed as it was of representatives from the various states, would refuse to pass laws seen as giving excessive authority to the central government. In the populist spirit, it weakened conscription laws, refused to nationalize the railroad and shipping industries, and ultimately revoked impressment laws (23:245).

Confederate correspondence is littered with the complaints of state officials against the actions of Confederate agents. Zebulon Vance, Governor of North Carolina, fired off a typical letter to the Secretary of War protesting the zeal with which the Confederate Conscription officers carried out their unpopular duties:

Now, sir, after [various state employees] have been taken by the Confederacy will you please to inform me what remains of the boasted sovereignty of the States? . . . God forbid that the rights, honor, and the existence itself of the States should rest only upon the grace and mercy of a bureau of conscription. The rights of the States certainly rest upon a more solid basis than this. I cannot, therefore, recede from the position before assumed, that it is my duty to resist the conscription of all State officers and agents whose services are necessary to the proper administration and due administration of the affairs of this State, and of which necessity her authorities must, of course, be the judge. Neither can this claim, plain and obvious as it is, be permitted to rest upon the grace of Congress as exemplified in the exemption bill, or the discretion and good will of those intrusted with the execution of the law, but upon those higher and inalienable rights which by the genius of our Government are deemed inherent in and inseparable from the sovereign character of the State. (54:466)

Ironically, by the end of the conflict the Confederacy had been forced by the necessities of war to assume more centralized authority than the United States government had ever done. One scholar has stated that Jefferson Davis "dragged Southerners kicking and screaming into the nineteenth century" (58:59). In so doing, Davis became the lightning rod for those die-hard states'-righters that thought the government had gone too far. Evaluations of Davis by Southerners and historians have been influenced by their more philosophical convictions concerning the power a central government should wield in a confederation of states when confronted with a life or death struggle for existence.

Clifford Dowdey, the leader of the 'Davis-haters' among recent historians, has termed him that "rootless man of

ambition", for whom "states' rights were only a principle." Davis' administration "never seemed to remember that the people had seceded as states, gone to war as states, and as state citizens largely carried the burden for a new and distant central government which ignored them" (15:289). Dowdey's attitude was certainly not new among Southerners who resented the 'highhanded' way in which the national government pursued the war. Edward Pollard, editor of the Richmond Examiner during the war, explained in 1866 that Davis' modest gifts had not been enough to overcome

... the hasty and superficial defects of character which were rapidly to be developed in the course of his administration of the new government. His dignity was the mask of a peculiar obstinacy, which, stimulated by an intellectual conceit, spurned the counsels of equal minds, and rejected the advice of the intelligent, while it was curiously not inconsistent with a complete subserviency to the smallest and most unworthy of favorites.... He had no practical judgment; his intercourse with men was too distant and constrained for studies of human nature; and his estimate of the value of particular men was grotesque and absurd. (41:91)

So, on the one hand there are historians that criticize the Confederate government for not overriding the states and forcing a strongly centralized bureaucracy on the Confederate states (the Owsley state rights school), and on the other there are scholars that accuse the central government of highhanded peremptoriness in their abrogation of excessive authority in dealing with the war (the Dowdey Davis-hater school). It is ironic that Jefferson Davis has

become the focus of their criticism, as he was one of the firmest of the Confederate administration in his commitment to states' rights. Indeed, many recent historians believe that Davis' intransigence in refusing to allow his government to adopt comprehensive control of the nations resources that led to the Confederate downfall, a refusal ultimately based in his adherence to the doctrine of states' rights. Emory Thomas sums up the situation:

Southerners during and since the Confederate period have hated Jefferson Davis. Some of Davis' critics have accused "King Jeff I" of despotism and tyranny in his management of Southern statecraft. Other critics have accused Davis of the opposite tendencies - executive weakness and unwillingness to marshal effectively the South's resources for war. Real Davis-haters have leveled both charges simultaneously. Actually the issue is larger than Jefferson Davis; it involves the response of the Confederate government to the demands of total war. (58:58)

The final sentence zeros in on why any study of the functioning of the Confederate war machine must include state rights and the role of Jefferson Davis. The importance of the doctrine as a fundamental tenet of Southern political thought, and the attempt of the Davis administration to balance the prerogatives of the states with the military requirements of the country, strike right to the heart of any review of the effectiveness of the government in carrying out war policies that were necessarily national in scope. Whether states' rights killed the Confederacy is beyond the scope of this study,

but without question they presented a formidable obstacle to the complete mobilization of resources demanded of the South as it groped for a politically acceptable response to total war. As will be seen, this was nowhere more detrimental than in the efforts of the Confederacy to formulate a coordinated approach to the logistics of food supply.

III. The Impact of Agricultural Production and Policies

Grain Production During the War

KING COTTON is a mighty man,
Renowned and great is he,
His fame is known throughout the world.
His ships plow every sea.

Chorus

Three cheers for him, let heart and voice
With pride swell his eclat,
King Cotton is a mighty man,
Hurrah! Hurrah! Hurrah!
(11:6)

Contending Points of View. The main theme in Southern grain production during the war years was the drive for 'conversion' from cotton and tobacco crops to the large-scale production of the subsistence staples necessary for war. But even in the years before the war Southern leaders campaigned for a more diverse economy. Progressive thinkers had spent years trying to convince the people that the South was potentially the richest region on earth, and that the only reason why it was not so in fact was that the people were not bold and daring enough to go forward. One of the leaders in the prewar push for agricultural and industrial modernization and independence was James D. B. DeBow with his DeBow's Review. Much of the upper South's 'renaissance' was due to the influence of his New Orleans based magazine (17:243-45). With the advent of war, editorialists hoped that the necessary stimulus was at hand

to jolt even the most lethargic of the planters out of their old ways. Indeed, at least one observer was so enthusiastic about the forced agricultural revolution that he wrote that it would be money well spent "if this war cost us millions" (17:4).

Not all Southerners agreed. The 'cotton men' argued that the South's greatest hope of success was through foreign intervention. This was best achieved by producing, and then hoarding, a large supply of the cotton on which the English textile mills depended. Do this, they argued, and the British would be forced to break the blockade or face massive economic hardships along with the Confederacy. If the South stopped raising cotton, however, the British would start raising it in their colonies in Egypt and India.

The 'bread men' used the same facts to argue the opposite point. Starting with the assumption that Southern armies could never be defeated in the field, they maintained that the blockade would be broken sooner by raising no cotton than by having a large supply in storage. If food crops were planted, the British would soon see that the South could never be starved into defeat, and so to speed the resumption of cotton production they would intervene to secure their supply of the staple and relieve the suffering of their mill workers. A South Carolinian summed up the prevailing opinion when he declared that if the Southerners persisted in raising cotton at the expense of food crops

they were "not only a blockaded, but a blockheaded people" (17:5-7).

Both groups agreed, however, that cotton would be the key to independence, either by stockpiling it as a lure to foreign powers, or by a self-imposed moratorium designed to encourage outside aid. In an address to Congress in 1861, Jefferson Davis explained why the loss of the cotton trade would force foreign intervention:

It is plain that a long continuance of this blockade might, by a diversion of labor and an investment of capital in other employments, so diminish the supply as to bring ruin upon all those interests of foreign countries which are dependent on that staple. For every laborer who is diverted from the culture of cotton on the South, perhaps four times as many elsewhere, who have found subsistence in the various employments growing out of its use, will be forced also to change their occupation. . . . it remains to be seen how far it may work a revolution in the industrial system of the world, which may carry suffering to other lands as well as to our own. (53:737-38)

The realities of the large-scale mobilization necessary for the coming war soon obviated any such theoretical international calculations. With the firing on Fort Sumter it became obvious that there would be no peaceful settlement between the seceding states and the Union, and each side began preparing for the struggle ahead. In the South it was too late to do anything about the 1861 crop; it had long since been planted with the traditional heavy emphasis on cotton. In fact, in spite of early rumblings in the press and in trade associations about the necessity for growing

food crops, the 1861 cotton crop was the largest on record, 4,490,586 bales, as opposed to 3,841,416 bales in 1860 (64:1). As a result, for the first year of the war the South was faced with mobilizing hundreds of thousands of men with no subsistence reservoir to draw from. The solution was to trade cotton for food until the Subsistence Bureau could organize and begin purchasing operations. The following letter to the Secretary of War from a Southern agent working for a British shipping firm typifies the scrambling activity in the first months of the war to obtain food supplies:

Savannah, April 24, 1861

Hon. L. P. Walker,

One of our correspondents in Glasgow has an iron clipper British ship of 800 tons now at Halifax, Nova Scotia. We are authorized to order her to Savannah if we will guarantee a return freight of cotton with dispatch to England, where she is immediately required. Although Halifax is not the cheapest place to buy provisions, they can be had much cheaper there than here, and we propose leaving to-morrow for Halifax in person, filling her with beef, pork, and fish for account for the Southern Confederacy and charging nothing for our labor, provided you will guarantee the owners of the ship against all losses by detention growing out of seizure, blockade, or ordered off to other ports if unable to enter this river. The papers for the provisions would be made out in our name as British subjects. We on our part would guarantee the ship a full cargo of cotton. (53:237)

Conversion. The real push for conversion began in the winter of 1861-62 in anticipation of the 1862 campaigns. From all directions farmers and planters were encouraged to raise corn, plant peas, save pea vines and grass for use as

forage, include turnips, and even plant peanuts between rows of corn . Farmers were warned that much of the bumper cotton crop of 1861 was still sitting at wharves due to the blockade. Another cotton crop would merely increase the supply on hand without adding to the total value since the price would fall without a market; it could not be eaten; and its accumulation at exposed points would tempt the enemy to make raids. "Plant corn and be free, or plant cotton and be whipped," declared the Columbus Sun, in Georgia (6:29). Otherwise, even the incomparable Southern fighting man "will be powerless against grim hunger and gaunt famine, such as will overwhelm us if we insanely raise Cotton instead of corn" (22:15-16).

With conversion to corn would come collateral benefits important to the manpower-deficient South. Raising cotton was extremely labor intensive, hence the large Southern dependence on slave labor before the war. By the time the crop had been picked and the seeds laboriously removed by hand from the cotton balls (the cotton-gin not being as widespread in the deep South as in the border states) the production cycle had stretched for ten months. Corn, on the other hand, was a four month crop. (22:19, 22-23; 11:11). The manpower thus freed from cotton processing could be used to at least partially offset the drain of common laborers into the army as the military buildup continued.

One of the problems was that the Southern military success in 1861 (the only major battle was the overwhelming

victory at Bull Run) convinced many Southerners that independence and free trade were at hand. Accordingly, some of them contemplated planting even more cotton than usual to take advantage of the presumably desperate English. More patriotic Southerners wanted to legislate against the raising of excess quantities of cotton, but here the nationalists ran up against the advocates of states' rights. Instead, the national government published the following proclamation 'urging' the production of subsistence crops:

Whereas, a strong impression prevails through the country that the war now being waged against the people of the Confederate States may terminate during the present year; and whereas, this impression is leading many patriotic citizens to engage largely in the production of cotton and tobacco, which they would not otherwise do; and whereas, in the opinion of Congress, it is to the utmost importance, not only with a view to the proper subsistence of our armies, but for the interest and welfare of all the people that the agricultural labor of the country should be employed chiefly in the production of a supply of food to meet every contingency: Therefore,

Resolved by the Congress of the Confederate States of America, That it is the deliberate judgment of Congress that the people of these States, while hoping for peace, should look to prolonged war as the only condition proffered by the enemy short of subjugation; that every preparation necessary to encounter such a war should persisted in; and that the amplest supply of provisions for armies and people should be the first object of all agriculturalists; wherefore, it is earnestly recommended that the people, instead of planting cotton and tobacco, shall direct their agricultural labor mainly to the production of such crops as will insure a sufficiency of food for all classes and for every emergency, thereby with true patriotism subordinating the hope of gain to the certain good of the country. (54:468)

Planters who refused to convert from cotton to foodstuffs were condemned by popular sentiment and pointed out as objects of scorn. The editor of the Southern Cultivator, another Southern agricultural journal, declared that such a man should be hanged for treason. Even worse, he was "meaner than the meanest Yankee that was ever born. Such a man would dig up the bones of his mother and make dice out of them to play for a counterfeit shin-plaster upon her tombstone" (11:7-8). Conversely, favorable publicity was given to those patriotic planters that managed to 'subordinate the hope of gain'. T. M. Furlow, of South Carolina, was held up as an "intelligent and patriotic Senator from Sumter County" when he declared that he would plant 1,200 acres of corn and only 20 of cotton (22:17).

All through the winter and into the spring the 'propaganda' effort continued. Mass meetings of farmers and planters passed resolutions promising to cut cotton acreage by one-half to one-third of normal and replace it with grain, potatoes, peas, beans, sorghum, and other food and forage crops. As the crucial planting season arrived newspaper editors summed up the case of 'bread versus cotton', saying that the evidence was in and the planters were the jury. "In the next few days our planting friends must decide whether they choose, on the one hand, cotton and subjugation, or corn and triumph." The returns were recorded by county almost as in an election: Warren and Hancock counties had gone for corn, another region reported

that "His Majesty King Cotton was formally dethroned by his subjects of the County of Clarke on Tuesday last. . ."

(11:8)

Most farmers and planters faithfully carried out the program. In 1862 the cotton crop had been reduced to 1,596,653 bales, or only 36% of the record 1861 crop (64:2). But in spite of the relative success, more could be done. Reports circulated about speculators who planted a screen of tall corn along roads and railways where the crops were visible, and planted cotton in the interior (22:19). Others found even more devious ways to elude public suspicion.

A South Carolina paper described one of these crafty operators. Prior to war, the planter in question had planted 450 acres in cotton and 300 in corn. All his manure was put on the corn land, and the normal yield was ten bushels to the acre or 3,000 bushels, enough to support himself and his fifty hands for the year. Now the planter selected his 150 best acres for cotton and put all the manure on it. The remaining 600 acres were planted in corn and yielded only four to five bushels to the acre for the same 3,000 bushels - just enough for domestic consumption with none to spare. On the cotton acres would go all the manure and intensive attention; with careful husbandry the planter might yield only slightly less cotton than before (22:30-31).

Public opinion had been the primary weapon used in the winter of 1861-62, but a few always chose to go their own way. As cotton became scarcer throughout the world and the price mounted, restraining the raising of the much-desired crop became increasingly difficult. Although the national government would not overrun the states' prerogatives and pass legislation, the state governments were free to act. The case of Georgia is typical of the Southern states in this regard.

In 1861 the legislature had passed a resolution 'urging' compliance. In 1862, fearing that the positive results had been more a function of the low price of the staple than of patriotism or respect for public opinion, the Governor called for a debilitating tax to be put on all cotton beyond the needs of the people (for clothing, yarn, and grain bags, for example). The legislators went even further. They passed a law allowing only three acres of cotton to be cultivated for each working hand and placed a \$500 fine for each acre in excess of this amount. Half of the fine was to be paid to an informer and the other half used for the relief of indigent families. Finally, copies of the new legislation were distributed throughout the South in an attempt to call other states to their patriotic duty (11:9).

Though unwilling to enact restrictive measures of this type, the national government followed these events with a great deal of interest. As discussed above, in the previous

year Congress had called for voluntary conversion on an individual basis. Now, Jefferson Davis expressed his gratitude to the Governor of Georgia for his initiative:

Sir: I have received and read with interest your letter endorsing a copy of an act and joint resolution of the Legislature of Georgia, partially prohibiting the cultivation of cotton in the State during the continuance of the war, and urging upon planters the necessity for increased attention to the production of provisions. The inauguration of this policy affords me great gratification. This prompt and emphatic expression by the Legislature of the sentiment of the people of Georgia, it is to be hoped, will be met by the concurrent action of the other States upon the subject; and from the general adoption of the scheme we may anticipate the best results. The possibility of a short supply of provisions presents the greatest danger to a successful prosecution of the war. If we shall be able to furnish adequate subsistence to the Army during the coming season we may set at defiance the worst efforts of our enemy. A general compliance by the farmers and planters, therefore, with the suggestions of this joint resolution will be the guaranty of our independence. (54:376)

No doubt the President's gratification increased as other states enacted similar laws. Alabama prohibited raising more than 2,000 pounds to the hand. South Carolina, Mississippi, and Virginia all followed with legislation prohibiting or taxing the production of cotton. Only Texas, true to the old Southern libertarianism to the end, could not bring itself to "tell a man what he should plant" (22:18).

In spite of Texas, the Southern campaign to reduce cotton acreage was a major success. From the 1,596,653 bales of cotton produced in 1862 (the first year of the

program), cotton production declined to 449,059 bales in 1863 and 299,372 bales in 1864, the last growing season of the war.

The flip side of the campaign to dethrone 'King Cotton' was the search for his most worthy successor. Corn became the favorite. As the Southern Cultivator observed in an unrestrained editorial in the winter of 1862

Let 'King Cotton' stand aside for awhile, until his worthier brother, Corn, receives our attention. Corn makes bread and bacon and poultry and beef, and fat horses and mules. It is good for 'man and beast' - it is the 'all in all' - the 'staff of life' for the South - it will feed our armies and help vanquish our foes! It is the great food crop of the continent, and one of the greatest blessings of the earth! Therefore, PREPARE NOW to cover a larger surface than ever before - to plant and cultivate in a better style, and, with God's blessings, to harvest a larger crop! (11:10)

Corn became so prevalent throughout the South that Confederates, when comparing their monotonous diet with that of the well-provisioned Federals, described the conflict as between the 'Fed' and the 'Cornfed.'

Prohibition. As the blockade restricted the import of European wines and midwestern whiskey, Southerners discovered that one could do more than merely eat 'one of the greatest blessings of the earth,' and distilleries soon sprang up throughout the South. By the fall of 1861, in some areas where there was a shortage of grain, distillers were using large quantities of corn and thus endangering the bread supply. The prohibition movement that arose to

conserve the grain supply was second only to the conversion program in its widespread support. By February of 1862, South Carolina had passed legislation prohibiting the distillation of spirits from corn, wheat, rye, or barley; Virginia, Arkansas, Alabama, and Georgia soon followed with similar legislation. North Carolinians must have been especially ingenious in their search for 'distillable' materials; in addition to the traditional grains its legislature found it necessary to prohibit the use of peas, peanuts, oats, Chinese sugar cane and its seed, syrup, molasses, rice, dried fruits, and potatoes (43:37-38).

Unlike the measures calling for conversion to food products, these statutes became a source of friction between state and national authorities. When Governor Vance of North Carolina was informed that the Confederate Government had continued distilling operations for medicinal uses, he wrote to the Secretary of War insisting that the operation be discontinued:

In addition to the many and weighty reasons which could be urged against the abstraction of this much bread from the Army or the poor I beg to inform you that the laws of this State positively forbid the distillation of any kind of grain within its borders under heavy penalties. It will, therefore, be my duty to interpose the arm of civil law to prevent and punish this violation thereof unless you will order it to cease. . . . I am sure you will agree with me in saying that no person can, under the authority of the Confederate Government, violate State laws with impunity. (54:1072)

Not everyone agreed with him. In his endorsement on the correspondence the Surgeon-General replied that "a state has no power to interfere with the General Government in the manufacture or even contracting for such supplies", and the distilling operations continued (54:1072).

The Governor of Mississippi was less diplomatic than the Governor of North Carolina. He wrote the Confederate commander in the area bluntly stating that if distilling operations did not cease, he would "have every bushel of corn in the distilleries of this State, or purchased for distillation therein, impressed for the use of the Army, and if that does not prevent it he will, under your requisition for copper to make guns, impress the stills" (54:510-511).

Meat Production During the War

Overview. After corn and other grains, the great need of the army was for meat products, primarily pork and beef. The problems faced by the Confederacy in obtaining sufficient quantities of meat were very different than those in obtaining grain products. The most important of these problems were (1) the locations of the South's prime livestock areas, (2) hog cholera throughout the war, (3) the scarcity of forage, and (4) the problem of meat preservation. These factors combined synergistically to make the production of meat the least successful of the South's agricultural efforts. As a result, while the corn supply actually increased as the war went on, the meat

supply, and consequently the standard military ration, was continually reduced.

Initial Efforts. From the outset, Southern planners knew that the awkward location of Southern livestock centers might cause difficulties. The Confederate 'heartland' of the Carolinas, Georgia, and northern Alabama and Mississippi was not a particularly productive livestock region; the bulk of the Southern animals were located along the exposed northern fringe and in the deep South and Southwest. In the first year it became apparent that the meat supply was in a very tenuous situation. Data on Southern meat contracts from the packing season stress how the Subsistence Bureau depended on the army to hold its position on the northern borders of the Confederacy. Of 249,000 hogs slaughtered, 193,200 came from Tennessee (two-thirds of these came from the Nashville area); 20,000 were purchased with gold from Kentucky; 35,300 came from Virginia; and 500 came from North Carolina. 2,500,000 pounds of bacon were contracted for, all from Arkansas and Texas (53:878-879). If the armies could hold these vital areas there would be meat for the foreseeable future. If not, scarcity and privation were not far away.

Hoping to conserve Southern fresh beef reserves as long as possible, the Commissary General, Lucius B. Northrop, made early arrangements to drain the border states of salted meats to the maximum extent possible. Although trading behind the enemy lines was strictly prohibited, he wrote to

the Secretary of War asking for an exemption. Northrop explained that although the purchases would have to be made in gold at a 25 percent premium (Confederate currency not being held in high regard in the North), "pork and beef are one-third less costly, and meat bought and cured from them will be cheaper than what is obtained within our own land." Northrop also noted that this would relieve the strain on the salt supply and the overmatched Southern packing houses (53:757). This program proved to be very successful in the first stages of the war, as described by Northrup his annual report:

The supply of salted meats was that which the department felt most solicitous to secure. Reliance [on Northern states or portions of the South under Union control would be] out of the question after the amount that could be got early in the year had been obtained. In the packing season of 1860-61 upward of 3,000,000 head of hogs were packed at the various porkeries of the United States, of which less than 20,000 were packed at regular establishments South of the lines of our armies. Of this whole number experts estimate that the product of about 1,200,000 hogs was imported in the early part of the last year from beyond our present lines into what is now the Southern Confederacy. Of this number it is estimated that about 300,000 hogs, in their bacon equivalent, have been consumed by our State and Confederate armies since the commencement of hostilities. (53:872-873)

Within the Confederacy he employed civilian agents to locate and bring in meat, and he arranged contracts with meat packers at liberal rates, hoping to drain the upper South before the region was lost for good. The magnitude of these projects resulted in unforeseen problems. Cooperation

for barrels to store meat was unobtainable in the quantities required, and in any case there was not enough salt to cure all the fresh meat being rounded up. Northrop directed that fresh beef be driven on the hoof directly to the army for consumption on the spot. Salted meats were to be saved for the summer, and a huge packing plant was constructed at Thoroughfare Gap near the army to cure, pack, and store pork and beef as the salt came available (53:875).

The results of the comprehensive program were gratifying. Large reserves were beginning to accumulate in Tennessee and Virginia, and the necessity for rail transportation had been reduced. Northrop was able to report a total yield of 29,818,888 rations of meat, enough to feed 225,000 men for 120 days, or fearing the worst, seven months at reduced rations (23:36-37). In January of 1862, a Congressional investigator was able to report:

The returns of this department show that although its chief supply has been obtained within the Confederacy, heretofore considered insufficient to support its population, with an untiring, vigilant, and remorseless enemy surrounding and endeavoring by every means to starve as well as subjugate, we have had our Army well fed, and with an amount on hand so large as to place beyond the reach of want for the ensuing campaign, and trusting in a kind Providence for usual seasons and the preparations that are made throughout the Confederacy for the next crop, we need fear no coming want (53:886).

From these promising beginnings, however, a string of bad luck and military setbacks combined to produce an ever-decreasing supply.

Provisioning Setbacks of 1862. The first of these was an outbreak of hog cholera. Although it had first been noted in the Midwest in 1857, it quickly spread through Kentucky, Arkansas, and Tennessee. A careful scholar of Confederate agriculture has concluded that the losses to the Confederate states amounted to the millions of dollars (22:90). The spreading cholera combined with - and was encouraged by - three months of draught and hot weather throughout much of the Confederacy during the summer of 1862, resulting in chronic shortages of both meat and grain products. Northrop estimated that the Virginia wheat crop was reduced by three fourths, from 1,000,000 to 250,000 bushels (54:158). Tennessee, formerly the center of Confederate animal husbandry, had been so ravaged by the disease that only 20,000 hogs had been slaughtered (53:873). In the last two years of the war the disease was reported in Mississippi, Alabama, and Florida; in North Carolina some farmers reported losing their whole stock.

Even worse than the cholera were the territorial losses the Confederacy suffered in the summer of 1862. By the end of the summer all of Kentucky, western Tennessee, Missouri, Northern Arkansas, and Northern Virginia were lost to the enemy. Though the proportion of territory measured in square miles was relatively small, as shown earlier, it was some of the most fertile farmland in the Confederacy. As Robert Kean noted in his diary, "The enemy are rapidly confining their hold on Tennessee, its flour and meat so

much needed by us. Alas, for our prospects this winter" (32:111).

Compounding the loss of the productive land was the loss of the packing facility at Thoroughfare Gap, along with the subsistence stores held there. In a classic case of uncoordinated actions the army withdrew from the area without providing sufficient notice for the Commissary Bureau to arrange for the relocation of the critical provisions, and over 1,000,000 pounds of foodstuffs were abandoned. Overnight Northrop's entire meat reserve was gone, and with the loss of the most productive livestock areas it would be difficult to replace. For the constrained Confederacy this was a disaster of the first magnitude, one from which it was to never completely recover. The interdepartmental bungling that led to its loss resulted in a Congressional investigation and eventually cost the Secretary of War his position, but the damage had already been done (23:55-56, 53:1034-1042).

Reduction of the Meat Ration. By November of 1862 prospects were much different than they had been in the spring. Because the draught had reduced animal forage, they were "so thin that the same number of bullocks does not go as far as it did last fall," and younger animals were having to be slaughtered. Some were only "eighteen months to two years old, a thing never heard of before." At the army's rate of consumption, it was estimated that beef would run out by January. To meet the need, Northrop turned to the

livestock-rich deep South and the West, hoping to drive cattle north to the army's positions (54:158-159). In the meantime Northrop made ends meet by reducing the ration allowance to the troops. The original allowance was based on the United States tables and called for:

Per individual ration: 3/4 lb. pork or bacon, or
1 1/4 pounds fresh or salt beef.
18 ounces of bread or flour, or
12 ounces of hard bread or 1 1/4
lbs. of corn meal.

Per 100 rations: 8 qts. peas or beans, or 10 lbs.
of rice.
6 lbs. coffee.
12 lbs sugar.
4 qts vinegar.
1 1/2 lbs tallow (for candles).
4 lbs soap.
2 qts salt (23:17-18).

With the loss of the Thoroughfare Gap supplies the ration was reduced to a "pound of beef or half a pound of bacon or pork" (54:414), and by the summer of 1863, Northrop was forced to recommend that the meat ration be further reduced to "one-third of a pound for all troops not engaged in actual movements, to one-fourth of a pound for all troops garrisoning forts, or manning permanent batteries or entrenched camps and the ration only to be raised to one-half of a pound of bacon when on an active campaign" (54:575).

The reductions were not occasioned by an inadequate supply of livestock within the borders of the Confederacy. The new Secretary of War noted in his annual report to Davis

at the end of 1863 that in spite of disease and lack of forage, "it is confidently believed, indeed, that there is a sufficiency of meat in the Confederacy to afford a reasonable supply to the Army, and yet sustain the people likewise, but to attain such result it must be husbanded with care and used with more economy than our people have been accustomed to practice" (54:1008). A major contributor to the lack of economy the Secretary refers to was the South's inability to procure sufficient salt to preserve meat for storage and shipment through the hot Southern summers. The Confederacy appears to have lost millions of pounds of beef and pork during the war as the result of improper curing (65:97).

Impact of the Salt Shortage. Salt was an essential commodity in the 19th century for several reasons. Most important, in an age with no refrigeration, the only way to store or transport meat was to use salt as a preservative. In addition, salt was necessary for the production of butter, cheese, soap, and leather (36:117). Prior to the war, the total United States demand for salt was 533 million kilograms, or roughly 200 pounds per person each year (36:120). Because at the time there were no known salt deposits in the United States suitable for large-scale mining, almost all salt production was through evaporation of seawater or brine solutions, and this amounted to only 248 million kilograms per year. As a result, the United

States was forced to import over half its annual salt requirement, primarily from Great Britain. British ships arriving for cotton and other trade brought in enormous quantities of salt, even using it for ballast (4:86). As Robert Multhauf noted in the conclusion of his survey of the world salt industry in 1850:

The most striking 'facts' evidenced . . . are the large exportation of salt by Britain, nearly equal in quantity to its internal consumption, and the large importation of salt by the United States, a quantity approximately equal to the salt used for the preparation of salted meats. (36:121)

In fact, the US was using 345 million kilograms annually for the salting of fish and meat, roughly 65 percent of its total annual requirement. For the Southern states the dependence on imported supplies was even heavier. The Southern diet included more salted and brine-pickled meats than the Northern, and while it contained 33 percent of the population, it accounted for only 27 percent of annual salt production in 1850 (61:153, A14-15). The net effect was that the South was only producing enough to cover about 20 percent of its needs just prior to the war (4:86).

With the coming of the war, the situation worsened rapidly for the South. On April 19, 1861, President Lincoln declared a blockade of the Confederacy, the first step in General Winfield Scott's 'Anaconda Plan' to wall the Confederacy off from European trade and potential resupply (21:111). Though a blockade in name only at first, by 1865

the gradual tightening of the Anaconda's coils had completely isolated the South from international commerce. The South, so heavily dependent upon imported salt at the war's onset, was gradually reduced to its own resources for providing that necessary article.

The Confederacy had relied on four primary sources of internal salt production: salt springs near Manchester, Kentucky; the salt springs at Great Kanawha in Virginia; salt wells near Mobile, Alabama; and the salt wells at Saltville, Virginia. However, Kentucky never joined the Confederacy, and the Union moved quickly to take the Great Kanawha saltworks as they were essential for their own large meat-packing plants in Cincinnati, Ohio (4:86). The remaining saltworks at Mobile and Saltville were simply inadequate to handle the Confederacy's growing demand for salt for both the military and civilian sectors.

With the immediate loss of two of its major salt producing centers, and the tightening blockade restricting the amount of imported salt, the South began suffering very early in the war from the lack of this strategic resource. In 1861, a Mississippi woman wrote her governor complaining of the shortage of salt, "What hogs we have to make our meat, we can't get salt to salt it" (4:86). This lack of salt to use as a preservative required the use of grain to carry the unslaughtered animals past the butchering season, thus further depleting the bread supply. Mississippi's

governor took these and similar complaints seriously. By 1862 the situation in Mississippi had deteriorated, and he wrote President Jefferson Davis for relief from a Confederate injunction against trading cotton (intended to raise the price of cotton on the international market), saying, "The importance of salt to be exchanged for cotton is to be regarded here as a necessity" (54:21-22). In Louisiana the conditions were no less serious. The governor requested and received permission "to obtain salt on the same terms precisely as the Governor of Mississippi, but with the earnest injunction that only salt absolutely necessary for the people of Louisiana be so obtained" (54:242).

The salt shortage also crippled Northrop's efforts at building up a reserve of meat for military purposes. In November of 1862 he wrote that although his agents were having some success in finding hogs, there was not "enough salt to pack all that could be obtained." He noted the large losses to the military due to insufficient salt and concluded "the pork in private hands will not be saved, either, as well or as abundantly, both from the bad quality of the salt and from its scarcity" (54:159).

By 1863, the salt situation was so bad that, in an ironic twist, it at least temporarily aided the Confederates in their never-ending quest for meat, as Northrop commented dryly to Secretary of War Seddon:

In consequence of the insufficient quantity and inferior quality of salt among the inhabitants, much of their meat is spoiling. The high prices [offered by the Government], and the fear that the commissioners of appraisement might not reach prices high enough to satisfy avarice, has doubtless stimulated every one who could spare any meat to bring it out, and the fear of its being fly-blown and spoiled in their hands has strengthened the patriotic desire of feeding the soldiers. (54:574).

Perhaps as a consequence of these 'patriotic' sales, Northrop was able to report that he now had 8,743,063 pounds of bacon and pork, and 8,282,827 pounds of beef, enough to subsist 400,000 men for sixty days at the new reduced rations (54:575).

In the first half of the war, the national government tried to obtain salt from independent suppliers overseas, and contracted to have the salt delivered directly wherever required. For this purpose they engaged the commercial firm of Charles A. Barrier & Brother, of Paris, to supply 100,000 sacks of salt, to be delivered "10,000 sacks at Ponchatoula Landing, 20,000 sacks at Natchez landing, and 70,000 sacks at Vicksburg landing, or all at the later place." The shipment was to be paid for in cotton, the international currency of the Confederacy, at the rate of 10,000 sacks of salt for 1000 bales of cotton (54:173).

As the blockade tightened, however, the Confederacy could no longer rely on such arrangements to supply its needs. The Federal government in Washington understood the problems the Confederacy was having in producing an adequate

supply of salted meats. In 1863 Lincoln moved to intensify the shortage by prohibiting the export of "all classes of salted provisions" from the United States (52:212), thus closing the door to international profiteers who purchased provisions from Northern merchants for resale to the Confederacy (9:47).

True to their States' rights orientation, the individual states tried make up the deficit through local operations designed to produce salt for their civilian populations, leaving the large saltworks at Saltville to supply the army's requirements for salt to cure meat for shipment to the front lines. The national government encouraged these state-level efforts as much as was in their power, exempting 'salt-makers' from conscription on the grounds that they were necessary for the proper subsistence of the armies, and equally necessary to the community at large (54:45). A promising development occurred in 1862 when a solid deposit of rock salt was discovered at Avery Island, Louisiana, only 20 feet below the surface, in a quantity that could have supplied the entire Confederacy from America's first saltmine. Before this windfall could be exploited, however, Federal troops captured the site and occupied it for the remainder of the war (17:239). The success of the state operations was uneven. The supply to the civilian population ranged from a half 'ration' in chronically troubled Mississippi, to nearly a full quota in North Carolina (56:166-181).

The local salt operations were subject to many of the same frustrations Northrop experienced in his continuing battle to procure enough meat. In his annual report to the North Carolina legislature for 1862, Governor Zebulon Vance explained:

The supply of salt will, I hope, hold out; but this subject, too, needs legislative action. Dr. Worth, the salt commissioner appointed by the convention, has been industriously at work, but he has not produced a great quantity owing to the great difficulties which he has mentioned in his reports. His first works, at Morehead City, were taken by the enemy before he had fairly gotten into operation. His next effort, at Wilmington, was successful in producing about 250 bushels per day for some time before they were interrupted by the yellow fever, which has caused a temporary suspension. As the pestilence has abated, they will, of course, be immediately again put into operation. The whole amount made there by the state and private individuals probably exceeds 2,500 bushels per day. Nearly all of this made on private account is bought by private citizens of other States and carried off for speculation at prices ranging from \$12 to \$20 per bushel.
(54:181-182)

Yellow fever and profiteering notwithstanding, one month later Dr. Worth reported that he had distributed 21,000 bushels to 75 counties at an average cost to the counties of \$3.50 a bushel (66:131).

Confederate Successes

To focus only on the hardships wrought by the salt shortage, drought, disease, and Federal advances leaves an erroneous impression of the achievement of Confederate agriculture during the war. All these factors, it is true,

made the jobs of the procurement and distribution infinitely more difficult, but research indicates that foodstuffs were produced in adequate quantities throughout the Confederacy to support the war. The Secretary of War's assessment of the situation in 1863 has already been noted above, and is a fair appraisal of the South throughout the war: enough to sustain both the army and the people, if husbanded with care and used with economy. Even the pessimistic - or more fairly, perhaps, cautious - Northrop reported in 1864 that the supplies in the country "if the meat can be collected in good condition and properly taken care of, will be sufficient to take the troops well on into the summer, and, with the addition of the supplies now reported on hand and those that are believed to be at Bermuda and Nassau (if the two last shall be in good condition), there will be enough to last them until the fall of the year (54:379). The Bureau was successful in collecting at least some of these supplies: in February of 1865 Northrop reported 2,577,704 meat rations and 8,718,000 rations of breadstuffs enroute to Richmond, along with "large quantities of rice", coffee and sugar (40:94-95). This final report points out the relative success the Bureau had in procuring breadstuffs as opposed to meats, a testament to the success of the conversion movement in realigning Southern crop production. And even the livestock situation was showing some promise: Northrop was expecting 20,000 beeves from Florida alone in the coming year (40:99).

On balance then, the South was successful in adapting its agriculture to the demands of the war. In Georgia, for example, the grain crop of 1862 covered over 5,000,000 acres, while cotton had been reduced to 250,000 acres. The corn yield rose from 30,000,000 bushels in 1861 to over 55,000,000 in 1862 (11:16). Throughout the Confederacy, and throughout the war, results of this nature were reported. The Virginia wheat crop recovered from the drought of 1862 and in 1863 was reported to be the largest in 25 years, and in Mississippi it was reported that "the crops and gardens, and the orchards yielded plentifully and that all kinds of poultry thrived in Mississippi" (64:5). If the wheat crop did prove insufficient, Northrop believed that "there is more than enough corn to make up any deficiency" (54:971).

When Sherman made his march to the sea through Georgia in 1864, he found the countryside stocked with food. He paid wry tribute to the success of the conversion program for aiding his progress, writing, "Convey to Jeff Davis my personal and official thanks for abolishing cotton and substituting corn and sweet potatoes" (6:29-30). His commanders reported that "even the most unproductive sections along our line of march yielded enough for our support", and estimated that they had taken 9,500,000 pounds of corn and other grain and 10,500,000 pounds of fodder in addition to what the animals consumed along the way (11:16).

Even in March of 1865, only weeks before the end of the war and in the midst of widespread hunger and suffering within the army for lack of food, the Commissary General was able to report "that a sufficient surplus remains within the Confederate lines in Virginia, North Carolina, upper South Carolina, and East Tennessee [all that remained of the Confederacy by then] to subsist the Confederate forces operating therein until the next crop can be made available" (55:1137). In the same month General Longstreet wrote to General Lee that there were large quantities of provisions in North Carolina, "a two or three year's supply" (50:1289). Subsistence Bureau officials reported that 12,500,000 rations of bread and 11,500,000 of meat were immediately available in North Carolina and Virginia (50:1297).

Summary

The facts above it seems clear that there was food in the Confederacy to the end of the war. Equally certain is the privation and suffering on the part of both the army and the civilian population. Food was abundant throughout the South during all the years of the war, and yet there was scarcity throughout the conflict. This dichotomy arose from the inability of the Confederacy to construct and manage an adequate logistics system to handle the unprecedented demands presented by the Civil War. The major physical component of the Confederate logistics system was its transportation network; the next section will examine the

effectiveness of the national and state governments in managing and maintaining their transportation infrastructure.

IV. The Impact of Transportation Policies

Overview

Impact of the Industrial Revolution on Warfare. By the middle of the nineteenth century the technology fostered by the Industrial Revolution had made possible sustained military operations on a scale much greater than had ever been witnessed before. When Washington launched his daring raid across the Delaware on Christmas Day, 1776, he did so with a command of 2,400 men (63:4). Eighty-seven years later when another Virginian led a bold strike across the Mason-Dixon line, Robert E. Lee was at the head of an army of up to 90,000 men enroute to Gettysburg (32:76; 10:676). To subsist such numbers, warring parties were forced to draw upon all the elements of national strength, including political, military, and economic components. No longer could armies in the field be supplied by simply collecting provisions from the local community (30:47).

Army historian, Col. T. N. Dupoy, described the novel conditions to which the contending parties would have to adjust traditional Napoleonic military doctrine.

Because it was the first war in which the Industrial Revolution had achieved its full impact, it was the first total war of history, and the first in which military strategy had to encompass the most effective utilization of all the resources of the opposing nations. There were two basic policy problems - creating the conditions which would permit the maximum mobilization of resources; and providing a framework of political objectives

within which the strategic employment of resources would make sense. (16:125)

Because the Confederates failed to solve Dupoy's second problem, they were never able to achieve his first objective - a maximum mobilization of all its resources. Nowhere is this failure more dramatically illustrated than in the management of the Confederacy's railway system, and nowhere was this mismanagement more detrimental than in the Confederacy's effort to subsist itself.

The Desolation of Northern Virginia. Ironically, the Confederacy's dependence on its transportation network was made more acute by military success in the Eastern theater. As discussed in Chapter II, it was of critical importance for the Confederacy to hold the vital industrial and agricultural centers of the upper South to maintain its military capacity. Paradoxically, however, the size of the force required to maintain a viable military presence in the region was far more than the local economy could support. The steady advance of technology had brought military operations to a magnitude far greater than could be sustained on a continued basis from produce from the immediate vicinity of the armies (26:100-102).

Although it was true that Sherman was able to subsist his army, and even add to his food reserve, from local produce "so long as the march could be continued from day to day" (48:159), when forced to remain in one area, armies of the size generated in the Civil War quickly denuded a

locality of provisions and forage. The success of the Army of Northern Virginia in repelling successive Federal advances until the end of the war meant that most of its operations were restricted to the narrow stretch between Richmond and Washington. Consequently, the army found itself marooned in an area of increasing agricultural desolation as locally available foodstuffs were rapidly consumed and the depredations of war limited production in the surrounding vicinity (35:164). This required the importation of large quantities of supplies from less exploited areas, as the Commissary General noted in March of 1865: ". . . in the Southwest and in North Carolina the forces can be subsisted from local resources and with the ordinary army transportation, but the Army of Northern Virginia must be supplied by distant railroad transportation" (55:1137). The key to the Confederacy's ability to redistribute provisions in the magnitude required was its transportation system.

Transportation Infrastructure

Long distance transportation within the Confederacy was accomplished primarily by railroad. Rail transportation was supplemented by an active blockade running program over the high seas from the West Indies and Europe, but even these importations were dependent on rail transportation from the port of entry to the areas of need.

Road transportation in the Confederacy was extremely limited. Most Southern roads were unpaved and unable to handle the volume of traffic required. During periods of rain these dirt tracks became long ribbons of mud in which wagons soon sank up to their axles. In addition, the demands of the cavalry and a general lack of forage in the South resulted in the gradual breakdown of draft animals. The Quartermaster Department estimated that the Confederacy was consuming 20,000 horses a year: only 5,000 of those were lost in combat, the rest were starved, diseased, abandoned, or sold (23:73). Thus, overland transportation by road was restricted to local redistribution, foraging in the army's general vicinity, and wagon trains carrying provisions and supplies as the armies maneuvered through the countryside. For relocating the agricultural production of the deep South and West, and for moving imported supplies to the fighting front, the Confederacy was almost totally dependent on the railroads.

It should be remembered that in 1860, the United States was not a unified, organized country. The nation had no standard time - Boston, New York, Philadelphia, and Washington each maintained its own time. The national postal service delivered only ten percent of the mail delivered in 1856, the rest was handled by local private carriers. The localism of American society is indicated by postal statistics for 1860. While the United States had a

slightly larger population than Great Britain, Americans posted only 184 million letters, while their British contemporaries posted 564 million (37:240-1). The extreme localism inherent in the South was most vividly expressed in the condition of its railroads at the outbreak of the war.

Railroad Network

Description. Southern railroads of the period were private ventures run by corporations catering to a specific market. If it appeared that a profit could be made by running a rail line from Savannah to Atlanta (to route cotton out and imports in, for example) an enterprising businessman would simply lay a line from Savannah to Atlanta. Whether or not his line connected with, or was even compatible with, other independent railways in the area was of little concern. The concept of an interconnected network of compatible lines crossing state borders was simply beyond the ability of the average Southern businessman to visualize. As a result, what at a first glance at the map looks to be a fairly coherent system dissolves upon closer scrutiny into a chaos of uncoordinated, independent segments. By 1860 there were no less than 170 of these separate concerns. In addition to private business ventures, two states, North Carolina and Georgia, operated their own railroad lines (35:167-168).

A major strategic shortcoming apparent from the beginning was that there was no rail connection at all to

the vital livestock states of Florida and Texas from the rest of the Confederacy. Although a connecting link was eventually built from Florida during the war, the productive regions of Texas were never incorporated into the transportation system of the Confederacy (3:6-8).

Predictably, this deficiency had dire repercussions for the procurement efforts of Commissary General Northrop. As the upper South was gradually drained of meat supplies, he was forced to turn to Texas and Florida maintain the supply. Because those states still had no rail link, the War Department tried to drive the cattle north to Georgia for slaughter and shipment to the front. This enterprise "failed of success on account of deficient grass on the route" (54:351). It was shortly after this failed attempt that Northrop was forced reduce the meat ration (54: 414), a consequence directly attributable to the inability of the Southern railroads to transport beef to the areas where it was required.

The isolation of Texas and Florida was only a small part of the general inability of southern railways to handle the demands of a total mobilization for war. Most difficult to understand today is the lack of any standard gauge (the width between the rails) among the separate railroad companies. The general Southern standard was 5 feet, but there was wide variation throughout the region. Most Virginia and North Carolina companies, for example, used what was eventually to become the national standard of 4

feet, 8 1/2 inches, but that was not universal even within these states. At least three North Carolina companies, and east-west routes through southern Virginia, used the 5-foot width. Georgia, South Carolina and Florida also used the 5 foot width, as did most of the companies in Tennessee and Mississippi. In Alabama, however, 4-foot, 8 1/2-inch gauges were common. Texans, naturally, rejected these plebeian dimensions and adopted a regal gauge of 5 feet, 6 inches, while in neighboring Louisiana the more conservative 4-foot, 8 1/2-inch measure was used (3:9-10).

The ultimate in this type of short-sighted planning was furnished by the Roanoke Valley Railroad, a short line being completed in southern Virginia as the war commenced. Construction had begun at the two extremes of the line and was progressing to an eventual junction in the middle. A Confederate engineer tasked with surveying the status of the lines in the area concluded his report with: "I would also offer for your consideration the fact that the rails have been laid on the two roads with different gauges" (54:1087). How the last spike of this ambitious project was to be driven was never explained.

Worse than the problems with the gauges of the tracks was the situation at what were euphemistically termed 'junction points.' Even where tracks possessed a common gauge, the rails frequently never actually connected (1:42). Initially the result of the inability of the businessman to

foresee the advantages of integrated transportation, the inefficient practice was continued through the influence of the teamsters who made a living transporting freight from one disconnected line to another. Through their efforts, in Virginia there was a law preventing any railroad from laying track within the confines of a city without the express consent of its corporate authorities. The result in Richmond, for example, was that none of the five railroads entering the city were connected; in Petersburg all north-south traffic was obliged to move by horse-drawn cart through the city streets (3:9). Similar conditions obtained throughout the South. Chattanooga, Knoxville, Bristol, Lynchburg, Charlotte, Raleigh, and Wilmington all required the breaking of freight and drayage (64:37). At the critical junction of Augusta on the state line, the Georgia and South Carolina railroads were separated by only 600 yards. Freight arriving at the port of Charleston had to be ferried across the river to the rail station on the opposite bank for shipment to the interior (3:9-10).

Relative mileages between the North and South have already been reviewed (some 22,000 to 9,000), but total mileage does not indicate the quality of the roads as well as capital investment per mile of track. Swam, Jen Louisiana led the South, spending \$40,223 per mile of track building reinforced roadbeds, trestles, and bridges. Virginia followed with mean investment of \$38,548 per mile. Next came Texas at \$31,186 per mile; Mississippi with

\$28,841 per mile; and Alabama at \$26,845 per mile. Other states followed with lower figures, reaching rock bottom with the thrifty North Carolinians, who spent only \$19,161 per mile. Significantly higher were the amounts spent by the Northern states, generally on track traversing more favorable terrain than in the South. Massachusetts spent an average of \$45,500 per mile; New York and Pennsylvania around \$52,000 per mile. Even prairie-flat Illinois invested a respectable \$36,000 per mile (3:4). Higher investment resulted in more extensive collateral facilities. Much of Northern mileage was double-tracked, and in terms of siding and yard facilities they were vastly superior (2:232)

The lower investment in Southern track was evidenced in what railroad historian Robert C. Black has characterized as 'cheapness of construction.' Southern crossties were shorter and less well cured, bridges were not as sturdy, and less iron was used in the rails. Southern track averaged from 35 to 68 pounds per yard, as opposed to today's average 110-150 pounds. Stone or gravel ballast was seldom used; crossties were usually laid directly on the ground. Cutting corners had allowed the South to lay more miles of track than otherwise would have been possible, but at the cost of durability. The flimsy Southern track wore out in five years, whereas in the North track lasted an average of eight to ten years (3:13).

Even before the war Southern railroad men had tried to pamper their rickety system by reducing speeds; the average

Southern train of the period seldom exceeded of 25 miles per hour, some covered less than 15 miles in an hour (3:31). The maximum speed recorded appears to have been the forty miles an hour attained by the Louisville and Nashville, but even so ardent a booster of Southern progress as J. P. DeBow could not endorse such a radical exercise (2:235). The heavy usage of the war, combined with the inability of Southern heavy industry to replace worn out rails, resulted in further reductions as railroaders tried to conserve the precious track. These reductions appear at times to have been dramatic. A traveler on the Wilmington, Charlotte and Rutherford Railroad during the war reported that the speed of his train was so slow that it was repeatedly passed by an old Negro walking alongside the track while burdened with farm implements. When hospitable passengers invited him to get on the train as it overtook him, he politely responded: "Much obleeged, Boss, but I hain't got time" (2:289).

Southern businessmen had also scrimped on rolling stock for their railroads. Because industrial capacity was so limited, this was especially true of engines. With an equal length of line, the Marietta & Cincinnati had 37 locomotives to the Virginia Central's 27. More engines operated on the Pennsylvania Railroad than in the entire state of Virginia. The leading southern lines in terms of motive power were the South Carolina Central with 62 engines, and the Central of Georgia with 59. Standing in sharp contrast were the New

York Central and the Erie, each with over 200 engines. Statistics were similar for railroad cars. No Southern line had over 900 cars, while the Delaware, Lackawanna & Western alone had over 4,000, and even a provincial carrier like the Michigan Central (for the times) owned about 2,500 (3:20-21).

Indeterminate time references plagued the South as well as the North. Each railroad regulated its schedules based on a master clock, set to the local mean solar time, located at some point along its route. The Western & Atlantic used Atlanta time, while the connecting Georgia Railroad used Augusta time. Trains in South Carolina were run in accordance with the "clock at Charlestown depot" while the Richmond and York was controlled by the "Regulator at Mitchell and Tyler." A North Carolina schedule noted simply that "The standard time of this road is eight minutes faster than that of the S. Carolina." Woe to the North Carolina traveler that did not keep up with the 'clock at Charleston depot,' he was likely to miss his train. A railway guide of the 1860's noted sardonically that "The inconvenience of such a system must be apparent to all, but is most annoying to persons strangers to the fact" (3:32).

Initial Wartime Management. It was with this uncoordinated hodgepodge, then, that the South entered the war and orchestrated its military buildup. On the eve of the war the railroads were underpowered, poorly constructed, and facilities did not exist to undertake any major repairs

or maintenance. Serious strategic gaps existed in the network of lines. The isolation of Florida and Texas has been discussed; even more serious for the war effort was a 50-mile gap from Greensboro to Danville in an otherwise complete inland route from the Deep South to northern Virginia (42:304-5). With a coordinated railroad policy and energetic management these problems could be overcome; instead, the laissez-faire attitude that dominated Southern business caused the railroads to be inimically opposed to any governmental programs to coordinate and control operations in the interest of military rather than business traffic.

As a result, the Confederate government began the war with an ad hoc collection of contracts and patriotic gestures agreed to by railroaders in a series of conventions from April to July of 1861. The War Department was empowered to enter into "some suitable arrangement with the railroad companies, their officers, or authorized agents" (54:200). It was agreed that soldiers and military supplies would be transported at half the civilian rate, and the lines agreed to accept Confederate bonds as payment in lieu of hard currency. As the agency likely to have the most interaction with the lines, the Quartermaster Bureau was put in charge of overseeing these contracts and agreements for the Confederate government. In an extreme example of diffusion of management, particular contracts were to be

negotiated on-the-spot between local quartermaster representatives and the individual railroads (23:17). These loose arrangements were immediately tested in the first battle of Manassas (Bull Run), where both the possibilities and pitfalls of the Confederate reliance on the railroad were explicitly revealed.

Manassas Fiasco and Reassessment. After a shaky beginning, this first battle of the war was transformed from certain defeat to a resounding Southern victory by the arrival of fresh reinforcements from the Shenandoah Valley by rail just at the crucial point in the contest. It was proposed to follow-up the victory with a general assault on the demoralized Federal army that had retreated to Washington, but the inability of the Subsistence Bureau to forward provisions for the extended movements necessary made the operation impossible. General Beauregard, the Confederate commander at Bull Run, touched off a storm by writing that "The want of food and transportation had made us lose all the fruits of our victory. We ought at this moment to be in or about Washington. Cannot something be done towards furnishing us more expeditiously and regularly with food and transportation?" (23:23). The shortages continued in the weeks following the battle, and Northrop immediately became the focus of public and official criticism. Mrs. Chestnut confided in her diary:

Now, if I were to pick out the best abused, where all catch it so bountifully, I should say Mr.

Commissary-General Northrop is the most cussed and vilified man in the Confederacy. He is held accountable for everything that goes wrong in the army ... They say Beauregard writes that his army is on the verge of starvation. (8:124)

When Northrop was unable to forward 1,000 barrels of urgently needed flour from Richmond to the front because of lack of transportation, a telegraphic chain reaction of charges, countercharges, recriminations, and excuses instantly exploded. Northrop protested that he had already sent 2,000 barrels in addition to the 1,000 requested, but that they weren't getting through due to "some difficulties on the roads. The agent of the Central Railroad writes that it is impossible to transport the flour" (45:857-8).

A full-blown Congressional investigation resulted (the same that looked into the Thoroughfare Gap fiasco) as the dimensions of the transportation snafu became apparent, and tempers became strained. The investigation gradually revealed that the army had been holding the railroad cars at the front for use as makeshift storage facilities, rather than unloading and returning them to the depots (45:857-8). Northrop was cleared of blame, but the investigation picked up momentum, claiming the Secretary of War as its first victim. His replacement wrote curtly to the Quartermaster General complaining of the slow progress in unraveling the mess as the remaining parties scrambled for cover:

Sir: I have your letter of the 21st instant, which exonerates from blame the quartermaster at Manassas, but this is only half the result required

in my letter to you of the 20th instant. I desire to know whose is the fault that the transportation on the road was so blocked up by the absence of cars from Richmond that the commissary General was unable to get one thousand barrels of flour conveyed to the army on an emergency. We now have a definite issue before us. You have ascertained that the blame was not attributable to the officer at Manassas. Who was the delinquent? I must insist that the investigation be pursued until the question is satisfactorily answered. (45:871)

Out of the inquiry emerged the realization that the existing relaxed arrangements were simply insufficient to handle the complexities presented by the sheer scope of Confederate logistics. With transportation resources already cramped at the outset, and with every prospect of becoming more constrained as the war continued, some central authority was needed to set priorities and balance conflicting requirements. The present system provided no coordination whatsoever; everywhere local quartermasters entered into local arrangements with the local railroads believing that the doctrine of laissez-faire could be successfully applied to the problems of military transportation. The result was an inefficient application of the transportation resources available and internecine squabbling among Bureau chiefs, departmental commanders in the armies, and the civilian administration.

The meat supply at Thoroughfare Gap, for example, was lost because of the inability of the regional commissary officer to obtain sufficient transportation in time to move

the provisions to a safe location. He explained to Northrop that

I received from you notice of the proposed evacuation of Manassas . . . two weeks before it occurred, and could I have obtained the transportation by railroad which was promised all the property at Thoroughfare could have been removed during the first week; had I been told that such transportation could not be had I could have removed it all by wagons to Warrenton within the time, but I was not aware of that fact until the day before the evacuation occurred. (53:1039).

Clearly, some sort of broad control over the railroad network was required to coordinate the interdepartmental ramifications of the first 'modern war.'

Growing Sentiment for Comprehensive Regulation. If the inaugural effort of the Confederacy was marked by an ad hoc collection of patriotic gestures and resolutions, as the war progressed support grew for increased government regulation of the railroad system. Starting first at the lower levels of the administration, as the problems with transportation grew progressively worse, sentiment for reform crept up the bureaucratic hierarchy until even Jefferson Davis became convinced and allowed War Department management of the network. However, this development came too late in the war to make a significant impact. The Davis administration initially responded by appointing William Ashe as assistant quartermaster in charge of rail transportation to the Confederate armies in Virginia. Incredibly, even after the Thoroughfare Gap and Manassas failures he was given no

authority other than advisory powers (2:237). Powerless to do anything other than make recommendations that were usually ignored by both military and railroad officials, he gradually faded from the scene and by 1862 had returned to civilian life (3:66-70).

This first attempt by the Confederates to organize and integrate their railroad system was typical of all their efforts towards efficient logistics management during the war. Constrained by their states' rights orientation from planning aggressively, the Davis administration adopted the negative habit of formulating policy by reacting to circumstances rather than planning ahead. Admittedly, there were serious problems to contend with, especially in the supply arenas. As the war developed into one of attrition on an unprecedented scale, problems arose for which there were no 'book' answers and which defied snap solutions. As the weaker adversary, however, the Confederacy desperately needed to evaluate its assets and liabilities dispassionately. Furthermore, the creation of a basic plan to coordinate resources and assign priorities in order to use the country's resources efficiently was essential. Instead, separate, and often conflicting, policies were haltingly adopted as stop-gap measures only when forced by the events of the war. As a result, the administration was always at least one step behind in adjusting to the demands of the conflict.

Immediately following Ashe in the pantheon of Southern railroad administrators with no authority was William Wadley, who was appointed in November of 1862 and persisted in the impossible task until June of 1863, when his appointment was mysteriously disapproved by Congress, either because of his Northern birth or for some obscure motives of business revenge. After Wadley, Frederick Sims labored on until the end of the war, but the jurisdiction to rectify the uncoordinated jumble that was the Southern railway network did not come until the last months of the war. Unable, or unwilling, for reasons of political philosophy to come up with the proverbial 'ounce of prevention' in time, the Confederacy was ultimately to find that it did not have the resources to effect a 'pounds worth' of cure.

With Ashe and his successors unable to do much more than fire off advisory messages, standardize shipping documents, and publish timetables, the Confederate transportation problems quickly accelerated. The biggest problem was that the flimsy system, already short of engines and cars, was simply wearing out under the strain. Trains were subject to delay from the necessarily slow operating speeds, breakdowns, wrecks, and lack of repair capability. The great material need was for rails. Experts estimated that 43,500 tons of new rails were required annually to simply maintain the 6,300 miles of road integral to the war effort. Further, the entire capacity of Southern industry

amounted to only 18,000 tons annually "assuming the relinquishment by the Government of all other work to be done" (54:512-13). In fact, research has not discovered evidence of the first rail (or locomotive) produced in the South during the war; the limited industrial capacity was quickly consumed by munitions requirements (55:1092). Occasional dribbles of rolled iron were procured through raids, importation, or outright seizure of stock belonging to Northern firms but stored in the South, but these seem to have gone first to the plating of ironclads (3:88).

By 1864, government officials concerned with the rapid deterioration of the railroads began to question this ineffective application of the precious rails. John Jones reported in his diary that:

Major-Gen. Gilmer, Chief of the Engineer Bureau, writes that the time has arrived when no more iron should be used by the Navy Department; that no iron-clads have effected any good, or are likely to effect any; and that all the iron should be used to repair the roads, else we shall soon be fatally deficient in the means of transportation. And Col. Northrop, Commissary-General, says he has been trying to concentrate a reserve supply of grain in Richmond, for eight months; and such has been the deficiency in means of transportation, that the effort has failed. (31:326)

If government officials had the power to close nonessential lines and relocate the rails to areas of strategic necessity a source of supply sufficient for the foreseeable future was available. Unfortunately, few company officials could agree that their line was

nonessential; they all agreed, however, that the other fellow's was expendable. Although legislation granting the military authorities power to impress and administer the railroads had been granted in the Railroad Act of May 1863, Jefferson Davis refused to allow the War Department to exercise those powers until the spring of 1865, by which time the war was essentially over (2:237).

The rapid deterioration of the rail network had begun to seriously hamper Northrop's attempts to transport provisions from the relatively unmolested Deep South and West to the Virginia front. By 1863 the desolation of the northern Confederacy had already begun, as noted by the Secretary of War in a report to Davis: "The scarcity was greatest in one or two of the States nearest to our large armies, and the necessity for months of sustaining almost entirely the armies of Northern Virginia from supplies of corn drawn from South Carolina and Georgia, will strikingly illustrate both the dearth and the difficulty of supplying it." He went on to give an excellent summation of the transportation problems of the Confederacy:

The administration of the [War] Department in all its extensive operations has been greatly impeded by the deficiency of transportation, especially on railroads. Shut off from the sea, and with command of very few of its rivers, the Confederacy is dependent almost wholly on the railroads for communication and transportation. The roads were not constructed with reference to such extensive needs, and even in times of peace, with all facilities of supplies and repairs, would have been inadequate to such duties. How much less in time of war, with every drawback of deficient labor,

insufficient stock, defective machinery, and scant supplies, and with exposure often to seizures or spoils by the enemy, could they be expected to meet such unexpected requirements. (54:1012)

He praised their "patriotic spirit" in combating such problems, but had to inform Davis that lack of guidance had allowed the companies to make serious errors of judgment:

For the first year or more, under the delusive expectation of the early termination of the war, the companies relied almost wholly on their existing stock, and made few efforts at supply or reparation. They scarcely husbanded their resources, which, under the exhausting demands made on them, became greatly diminished. (54:1012-1013)

As a result, transportation was no longer sufficient for both the military and civilian sectors. Voluntary contracts could not meet the emergency, therefore, "From considerations of public utility and supreme duty, as well as from their dependence on the aid of the Government, they should be required by law to give preference in all cases to Government freight, so as to command all their means of transport when necessary." Nevertheless, complete regulation was too bitter a pill for the Secretary of War to swallow. He said "Beyond that it is the fixed rule of the Department to make no exaction on them, and to attempt no regulation of their surplus means of transportation, but leave such free to the discretion and management of their officer" (54:1012-13). In less than a year, however, he was adopt a very different opinion.

As the supply of transport dwindled, conflict with the civilian community grew. A series of impressments by local commanders had generated a constant stream of complaints from railroad officials, Congressman, and Governors. Even Northrop's supply trains were being disrupted, causing shortages in the army and prompting the issuance of a regulation whereby commanders were "prohibited from interfering with the transportation of provisions on railroads" and setting aside at least two trains weekly to bring foodstuffs from Mississippi to Richmond (53:1100).

Lack of transportation was foremost in Northrop's mind as he reorganized his procurement system for greater efficiency. In March 1863, he distributed a circular noting that the selection of sites for depots "must be made with due regard both to safety of position and convenience in relation to transportation. It must be remembered that transportation should be husbanded in every manner possible, and therefore that under no circumstances which care, prudence, and foresight can provide against must supplies be twice transported over the same road, nor any article of subsistence transported in opposing directions" (55:291). Northrop began a never-ending stream of communications to the War Department detailing the importance of transportation in moving his provisions to the front. At the end of 1862, for example, he concluded his review of the draught stricken wheat harvest by saying "Unless, therefore,

something is done to afford transportation for all the wheat that can be procured, I do not see anything but failure and ruin to our Army" (54:158). Mired as it was in the stripped region between Richmond and Washington, the Army of Northern Virginia felt delays in transportation more quickly than did forces in other, more bountiful, portions of the Confederacy. Northrop endorsed a message from a complaining Lee by explaining that "The reduction of the meat ration in General Lee's army was due mainly to local causes, that of transportation being the chief. . . ." Several days before, Northrop had observed that the depots at Raleigh were "blocked up at three different points," and that "Railroads worn out, horses killed up, are obstacles beyond the reach of the Commissary General" (46:687-688). A few months later he wrote urging the closing of the Greensboro-Danville gap to complete what became known as the Piedmont Railroad, noting that:

The single track from Weldon, even if undisturbed by the enemy, cannot transport it [large quantities of corn] in addition to its other necessary carriage. If the railroad were completed from Greensboro to Danville it might be done without difficulty. [The president of the line] says that the connection can be made in three month's time if the Government will put an adequate force on the road. This difficulty of transportation has been seen from the beginning of the war, and the Bureau has made constant representations of the fact. The mismanagement in transportation . . . has been

constantly felt and almost as constantly represented to the War Department. (54:971)

The continued existence of the Greensboro-Danville gap on Southern maps as late as the summer of 1864 was a graphic reminder of the ineffectual nature of southern political philosophy for the total war in which the Confederacy was immersed. The Piedmont Railroad was an obvious military need. Only fifty miles of track would provide a completely new route from Richmond to the Carolinas and beyond. It would also provide a badly needed 'inland route' with relative immunity from Union raids, an advantage not possessed by existing routes south of Virginia. As early as the fall of 1861, Davis had proposed a scheme of public assistance to the railroads to close the gap, but Congress had ignored it (42:304-305). The Richmond Examiner disapproved of the project, writing "The precedent of government aid to railroads is dangerous, difficult to be confined within proper limits, and liable to abuses and corruptions" (3:148-49). Public suspicion of 'government meddling' hampered the project until absolute necessity rendered public opinion moot. Even so, the project was begun in 1862, and by fits and starts progressed painfully northward.

The biggest needs were for labor and rails for track, but the only readily available sources for these were in North Carolina, under the jealous control of the ardent states' righter Zebulon Vance. He refused to allow the War

Department (under whose aegis the endeavor was being pushed) to impress either slave labor or rails for track, and candidly admitted that the state did not want the line completed. It was feared the western route would be "ruinous to many east of it," and that "upon completion the eastern lines of our roads would be abandoned to the enemy" (54:393-94). Though Vance himself was from the western part of the state, the majority of the population and business interests were still overwhelmingly in the eastern half, and Vance, ever the politician, was loath to ignore their interests). A victim of regional and state politics, the Piedmont continued to crawl slowly forward as funds and labor became available through public stock subscriptions in 1863 (42:304-305).

As the campaign season of 1864 approached, even the laissez-faire minded Secretary of War had come to the conclusion that something drastic had to be done about the Piedmont Railroad in particular and the railroad situation in general. Northrop had written in April that "For a long time past the commissariat of Virginia has been in a most precarious condition, at times without a day's ration on hand, while supplies may be said to be abundant in portions of the Confederacy, and some railroad depots south are filled with stores awaiting transportation" (51:851). The fervor of Northrop's repeated pleas apparently persuaded the Secretary that it was time for substantive action, for he

reported to the President that "Of all the difficulties encountered by the administrative bureaus, perhaps the greatest has been the deficiency in transportation. Some of the shorter and least important roads must be sacrificed and the iron and machinery taken for the maintenance of the leading lines and for the construction of some essential and less exposed interior links of connection." He explained that the government had no choice but to detail men from the army to assist with the maintenance and construction necessary to maintain the system. What was more, nonessential civilians and bureaucratic officials should be removed from Richmond to reduce the subsistence burden. These suggestions had been heard before, but now the Secretary wrote the ultimate heresy by suggesting comprehensive government control:

Full command over all the resources and means of transport possessed by the roads whenever needed for the requirements of the Government should be established. It may be, indeed is, believed now to be absolutely essential for the support of leading armies that on certain lines all the means of transport that can be commanded should be exacted. The roads should be run under unity of management, without reference to their local limits or separate schedules, and with the rolling-stock possessed by all, or which can be drawn from other sources. There should be the full power of commanding all this, and at the same time of requiring the continued service, as far as needed, of all officers and employees of the roads, so that there should not be even temporary (which might be fatal) delay or embarrassment in conducting the transportation. No reflection is intended on the zeal or patriotism of the officers or members of these railroad companies. On the contrary, it is gratefully acknowledged that they have generally manifested a most commendable disposition to meet

the requirements of the Government, and to make even large sacrifices for the common cause. Still, the measure of sacrifice which the need demands is dimmed to their perception by special interests, and is not infrequently too great to be acquiesced in without the exhaustion of all means of procrastination and prevention. (55:339-340)

In spite of the Secretary's recommendation, Davis remained reluctant to take such drastic action, and replied to Seddon that "Due effort should be made to secure the cooperation of railroad companies in the most effective plan before proceeding to take possession of the railroads. I am not encouraged by the past to expect that all difficulties would be removed by transferring the management of these extensive organizations to the agents of the War Department" (51:852) Davis, either obstinately or resolutely, depending on one's point of view, continued to refuse to impose policies of this nature for another year, a year that was to see the complete disintegration of the railroad network. In the meantime, the railroad companies seized the cue the President had given them and promised to deliver 10,000 bushels of corn daily, along with whatever meat might be required (23:201).

Collapse of the Railroads. From 1864, until the end of the war, the transportation woes of the Confederacy extended far beyond mere mismanagement - or more accurately, lack of management. While Lee had succeeded in protecting the Confederate capitol in Richmond, on the western front the Army of Tennessee continued to lose chunks of territory at a

disastrous rate. In 1862 it lost the provision and manufacturing areas of Kentucky and two-thirds of Tennessee, and in 1863 it lost the provisions, minerals, and railroads of eastern Tennessee. In 1864 it lost the subsistence and transportation backbone of Georgia. While Sherman was concentrating on destroying the rail network of the Deep South, raiding cavalry parties ripped up all four of Lee's major supply roads, destroyed bridges, and captured 419,000 provisions Northrop had somehow managed to scratch together (23:214). For a time outright starvation was feared in both the army and in Richmond.

The government was forced to respond to the crisis by pressing ahead the much delayed Piedmont Railroad, but typically it was reacting to events, rather than foreseeing and planning for them. An exasperated official of the War Department noted in his diary, "It is now probable the Piedmont Railroad will be completed by the 1st of June, as extreme necessity drives the government to some degree of energy. If it had been taken up, or allowed to be taken up, the rails on the Aquia Creek Road a year ago, the Piedmont connection would have been made ere this; and then this famine would not have been upon us, and there would have been abundance of grain in the army depots of Virginia" (31:365). It was estimated that 6000 to 7000 bushels of corn could be moved over the road each day, and the fear of starvation abated (47:989).

As the rail system deteriorated and the ability to transport food to the regions of need became increasingly uncertain, Northrop had been forced to consider alternative modes of transportation. He first attempted to drive cattle overland from Texas, the Gulf coast, and Florida, but this effort failed for "want of good grass on the way" (40:99). This inability of the Confederacy to make use of the vast food producing resources west of the Mississippi was one of the great consequences of the failure of the Confederate transportation system.

Since the fall of Vicksburg the Trans-Mississippi Department, as it was officially called, (or 'Kirby Smithdom,' after the commanding officer who wielded such power that it was almost his personal fief), was almost completely sealed off from the main population and combat areas of the South. It was in the Trans-Mississippi that the Cotton Bureau was established to trade cotton for supplies (forbidden by Davis in the rest of the Confederacy) from commercial blockade runners through the port of Matamoros, Mexico. Vast amounts of supplies were brought into the Trans-Mississippi via this lifeline (34:67-89), but there was little the rest of the Confederacy could do to reestablish contact with this remote supply reservoir. The transportation failure, and the information that "the dreams about the oceans of cattle in East Florida has no

foundation," (54:574), forced Southerners to consider ways to supplement domestic meat production.

One Confederate advised a comprehensive fishing program using invalids and men exempt from the draft, quoting scripture to remind Northrop that God had given man dominion over the seas and had commanded, "Let the waters bring forth abundantly." This pious suggestion seems to have caught the always temperamental Northrop in a particularly sarcastic mood; he rejected the idea as impractical and questioned the author's proficiency at Biblical interpretation, noting:

The writer has not shown from Scripture that the promised dominion over the waters and the fishes therein will confer on the 10,000 Confederate invalids and exempts the skill to fabricate all the appliances necessary to catch the fish or the judgment, perseverance, and hardihood requisite to use them successfully, even if the vast amount of cord needed was obtainable. Nor has it been shown that in the absence of these facilities and endowments that the promised dominion will cause in the fish a due avidity to be caught. It must be shown that the promised dominion over the waters will be admitted by Mr. Lincoln in favor of the Confederates, and induce him to prohibit hereafter the boat expeditions which have been used with great activity heretofore to break up the fisheries in the waters of Virginia and North Carolina.
(54:917-918)

Northrop instead proposed to exploit the 'promised dominion' in a more practical manner and began asking permission to trade overseas for provisions. He had realized the potential benefits of trading cotton for meat as early as October of 1862 (54:151), and repeated his request in January of 1863, adding that "without such an arrangement

the armies cannot be fed" (54:351). While still dependent on the railroads for transport from the port of entry to the lines, transportation from Wilmington, Charleston, or Savannah was much more reliable than from Texas or central Florida, and so importations of food could provide badly needed relief for both domestic procurement and the strained railroads of the deeper South.

Shipping and Blockade Running

Blockade runners experienced relative success in eluding the blockade, but too often their cargoes were dominated by popular but unnecessary articles such as silk and liquor, while meat purchased for shipment to the South spoiled on the wharves. Confederate purchasing agents had been dispatched to Europe to arrange contracts for supplies and to arrange for tramp steamers to carry the goods to Bermuda or Nassau. At these ports, other Confederate agents supervised the repacking of the goods into smaller lots for loading on light, fast steamers to make the run past the blockade into Confederate ports (9:48-50). It was here that the system began to break down, as most of the blockade runners were privately owned and preferred to carry the higher priced, popular goods rather than the more bulky and less lucrative military cargoes. Northrop wrote to the Secretary explaining why enforcement of regulations requiring blockade runners to dedicate a half their cargoes to military goods was necessary: "Blockaders seek freight of

great condensed value and little specific gravity; therefore meat is not brought in when it can be avoided. In fact, what has been accumulated at the islands [Bermuda and Nassau] has not been brought in fast enough to keep it from spoiling" (55:931).

Slow shipping aggravated the meat spoilage problem that the salt shortage had caused. Such spoilage constituted a great loss to the Confederacy, so much so that Northrop suspected that meat that was still edible was being discarded unnecessarily. He wrote to his agents in the field, "If your box meat is condemned because it does not look red, perhaps, cook some and get the general or commanding officer to try it. If not spoiled, make a struggle against the board of survey" (53:1037).

Nevertheless, meat was decomposing so rapidly in the humid conditions in the islands that Northrop was just as happy that more had not been accumulated there; otherwise there would be "a still greater loss than attends their delay at those points for want of steam transportation hither" (55:380). Northrop could hardly be held responsible for such losses, but his critics lost no time in blaming him. After the war, one Confederate officer wrote, "Into Wilmington was brought by Mr. Northrop that rotten, putrid bacon called 'Nassau' because it had spoiled on the wharves of that place, before being reshipped to Wilmington. It was coarse Western bacon bought by Confederate Emissaries at the North, and many a time here we imprecated curses on poor

Northrop's head as we worried down a piece of the rancid stuff" (27:497).

To solve the problem, Northrop and other administration officials had proposed regulating the blockade runner trade, but again, they ran up against the laissez-faire attitude that dominated Confederate commercial policy. Eventually, as with the railroads, forceful legislation was passed requiring that anyone importing nonessential goods receive presidential authorization, and that every incoming ship to surrender at least half its cargo space to shipments under government contracts. However, this legislation came so late in the war, February 1864, that it was of little practical value, though much debate was stirred by the socialistic tendencies of the act (59:265). If passed in 1862, when blockade running was still relatively safe and capacities were large, great benefit might have been realized. Instead, Northrop could only lament to the Secretary that changes once again had come too late. He had accumulated large stores in the islands, but now

It is feared that the condition of much of the meat will not be good. Some of that at Bermuda has been lying in that climate nearly a year for want of transportation, to say nothing of loss in transit during delays. The most persistent efforts and appeals of this Bureau have never enabled it to engage transportation enough to meet the supply of essentials to subsistence and to accumulate the most meager reserves. Indeed, but for the seasonable purchase of coffee, wherewith to supply the deficiency of meat, serious evils would have resulted from want of necessary food, which, though

procured, could not be distributed for want of transportation. (55:380, underlined for emphasis)

Though the adequacy of coffee as a meat substitute seems questionable, once again the fundamental problem of Confederate subsistence logistics has been made clear: food was available, though not in cornucopian quantities, but the transportation required to redistribute it was insufficient. Now Northrop goes on to say to the Secretary, in effect, 'I told you so,' a penchant of his that was ultimately to contribute to his dismissal:

This has been the uniform view of this Bureau. Very early it favored the appointment of a commercial agent abroad, who should be enabled to furnish all the wants of the Government . . . as they might be developed. But this, it was understood, was discountenanced by the Government on the ground that private enterprise was a better reliance than Government efforts. It adopted and urged the acceptance of the first propositions made for trade beyond the Mississippi and through the blockade. and has done so persistently ever since. Its efforts have sometimes been disapproved of and at others foiled by failures in obtaining ocean transportation. (55:380)

Northrop concludes sarcastically (another character flaw that contributed to his extreme unpopularity) by remarking that the government bungling was so bad that it was just as well he had not stockpiled more supplies: "That more active efforts [to gather supplies] would have been abortive is proved by the ill-success that has attended the later enterprises of the Government, and if attempted by this Bureau could only have resulted in an accumulation of

supplies to a greater extent than those now at the islands, and a still greater loss than attends their delay at those points for want of steam transportation hither" (55:380).

Conclusion

With both the railroads and the blockade runners, delay of the necessary legislation to control the transportation network resulted in great loss and inefficiency in the subsistence process. In his study of the Confederacy's railroads during the conflict, Robert Black concluded that the Confederates had committed two major logistical errors, mistakes which apply to the management of their oceangoing transportation system as well. First, he determined that owners, managers, and even employees were unwilling to sacrifice their personal interests. Railroad companies refused to allow relocation of nonessential track to areas of heavy use, and only grudgingly transported government freight (often Northrop's bulky grain shipments), when more profitable commercial freight was available. The almost identical practice prevailed in the shipping industry, where blockade runners ignored military cargoes for the lucrative luxury trade in liquor and silk. Second, and the more important, Black asserted that the Confederate Government was loath to enforce the kind of transportation policy the war effort demanded. He concluded

Calhoun's glorification of the individual state may have provided a satisfactory political philosophy for outnumbered southerners in the old Union, but

they were hardly the engine of unity in the face of military attack. [The theory] had, over the decades, so permeated the thinking of southerners that they stood in terror of their own creation at Richmond. Without either wholehearted public cooperation, or government coercion, it is practically impossible to wage a modern war. It is well to possess both of these things. The Confederacy had too little of either. (3:294-295)

Without the efficient use of transportation, especially the railroads, the Confederate logistics effort was severely crippled. Dependent as it was on the ability to continuously relocate large quantities of supplies from distant regions, the Subsistence Bureau was affected more grievously than the other supply bureaus, resulting in great hardship and the illusion that Southern food supplies were inadequate to meet the demands of the war. The catastrophic effects of the transportation breakdown on the subsistence effort are summarized by historian Charles Wesley:

These variations [in food prices] and the apparent scarcity of food were due not to the fact that there was no food raised in the South, but that the transportation facilities could not make the food available to the people and the armies. Transportation was the great problem of the Confederacy, and it was one of the influential material causes in bringing about the collapse. (64:42)

V. The Impact of Administrative Policies

To reduce the stresses imposed by potentially critical logistics decisions, commanders must establish a simple and secure logistics system in peacetime that can reduce the burden of constant attention in wartime. (14:2-6)

Overview

During the period of sitzkrieg from the passage of the Confederate Constitution in February of 1861, until the battle at Bull Run in late July, the Confederates worked to set up the military and civilian administrative apparatus under which the war would be conducted. One of the most important elements of that apparatus was to be the War Department; the primary logistics agency of the Confederate administration. Within the War Department was the Subsistence Bureau. Headed by Lucius B. Northrop, this was the agency responsible for the procurement and distribution of food supplies to the army. The topic of this chapter will be the effectiveness of that organization, and the entire Confederate government, in meeting their provisioning obligations.

As has been seen throughout this study, one of the handicaps the government faced in the early days was the prevailing opinion that the war would be short and independence easily won. The necessity for a single-minded dedication to the formation of a strong central authority was not obvious, and even if it had been, the political

climate made it questionable whether such power would have been granted. As a result, the Confederacy went to war with an army raised through voluntary twelve month enlistments, a Vice-President so rabidly opposed to any notion of national authority that he refused to participate in the government and eventually went home, and no Supreme Court to iron out differences between state and national interests. It was also in this spirit of improvisation that the administrative hierarchy of the war effort was created. The factors that resulted in an improvised war also mitigated against the creation of 'simple and secure' logistics system to administer that war.

Administrative Chain of Command

The President. At the top of the logistics chain of command, of course, was Jefferson Davis, the President of the Confederate States of America. As a graduate of West Point, army officer and minor war hero in the Mexican War, and former Secretary of War under Franklin Pierce, Davis considered himself something of an expert in military affairs. His army experience had strengthened what a biographer has termed "a natural rigidity of will and thought" so that he was "more concerned with the formalities of life than its flexibilities" (28:20). Many commentators have attributed the military decline of the Confederacy to his interference with his generals; less noted, but possibly more deleterious in the long run, was the enervating effect

his authoritarian manner had on the ability of the War Department to act as a center of coordination for the logistics effort.

When this iron-fisted control was combined with his deep-seated reluctance to interfere with the prerogatives of the states and the civilians, the result was a pervasive governmental lethargy and general lack of direction in pursuing the authoritarian measures necessary for a complete mobilization of the Confederacy's resources. Kean noted in his diary

Judge Campbell tells me that the Secretary and President are at their wits end and seem to have no plan, to be drifting along on the current of events. This is characteristic of the President. He is not a comprehensive man. He has no broad policy, either of finance, strategy, or supply. It is the same way with ideas. The fatal notion of making each military Department a separate nation for military purposes without subordination, cooperation, or concert has lost us the Mississippi. (32:72)

The War Department. The War Department was next in the line of military authority, one of six original cabinet positions in the Confederate government. Established by an Act of Congress on February 21st, 1861, the War Department was composed of the basic administrative agencies for the conduct of war - the supply departments. It originally included the Adjutant and Inspector General's Bureau, the Quartermaster Bureau, the Medical Bureau, and the Subsistence Bureau, which was in charge of administering the collection and distribution of provisions for the

Confederate government. Later, a de facto Ordnance Bureau was added to handle the supplying of weapons and ammunition, though Congress never officially chartered the organization (23:6-10).

The nominal head of the War Department was the Secretary of War, a thankless post that was to consume five unfortunates in the course of the war. In reality, all major decisions, and most minor ones, had to be cleared through the President himself. Consequently, initiatives and suggestions of the War Department were always subject to the litmus test of the President's personal brand of political and economic theory. Naturally, rather than becoming a strong advocate of the progressive measures necessary to the Confederate military endeavor, the successive Secretaries became reduced to little more than conduits of information to and from the President.

This was especially true when the Secretaries attempted to control or coordinate supply matters with military field commanders. When a general opposed a War Department directive, he would go over the Secretary's head and complain directly to the President, often with the result that the Secretary was overruled. At times, the Secretaries seem to have been left out of the information loop entirely. Kean recorded that "When the western generals were here (in Richmond), they had repeated conferences with the President to which he did not invite the Secretary of War. The

President issued orders, planning campaigns, as in East Tennessee, which he neither consulted the Secretary about nor appraised him of" (32:31).

The result of all this was that the single agency ideally situated to remain informed on a daily basis and make balanced resource appraisals and allocations free from political bias and the ideological infighting that characterized Confederate politics was effectively emasculated by the rapid turnover of Department heads and the President's overzealous monitoring of military activities. Kean concluded that "No one can administer the War Office, or the Government, on the terms laid down by the President. The President required his Secretary to incur the responsibility of office without discretion, and reduced him in very truth, as the people have long charged, to a mere clerk" (32:30). A prime example with major implications for the Subsistence Bureau was the President's reluctance to allow the trading of cotton overseas for provisions.

Cotton could have been the supreme financial and economic support of the Confederacy (28:207-8), and very early Northrop began peppering the War Department with messages outlining the necessity of trading cotton, both behind the lines and overseas, for provisions. In a lucky coincidence for Northrop, Benjamin Butler, the Federal Commander occupying New Orleans, began sending out hints that he might be amenable to just such a trade. The

Secretary of War saw the necessity of the arrangements, and wrote the President:

I am fully aware that in permitting the enemy to obtain a partial supply of cotton we are conceding an advantage to him and licensing an objectionable trade, and nothing less than the danger of sacrificing our armies would induce me to acquiesce in such a departure from our established policy. But the Commissary General, whose duty it is to study the question of subsistence and to inform himself of the sources of supply, and who has had the benefit of eighteen months' experience, having recorded his opinion that the Army cannot be subsisted under the present arrangements, I must decline the responsibility of overruling him . . . (54:151)

Typically, rather than forcefully advocating his subordinate's request, the Secretary only 'declined to overrule' him. Not surprisingly, then, the President adhered to his original policy.

Davis had founded his embargo on the hope that a cotton famine in England would force that country to break the blockade. In addition, he was of the opinion that trading through the lines would provide the North with a ready means obtaining cash, just when a large amount of United States War Bonds were coming due. He replied to the Secretary, asking:

Is there necessity for immediate action? Is there satisfactory evidence that the present opportunity is the last which will be offered? Have you noted the scheme of the enemy for the payment of their next accruing interest on their public debt? You will not fail to perceive the effect of postponing the proposed action until after January 1st, 1863, if it be necessary at any time to depart from the

well defined policy of our govt. in relation to
Cotton. (23:114)

Spurred on by Northrop, the Secretary continued to press the President, until disagreement over the proposal led to the Secretary's resignation. Eventually, growing procurement and distribution difficulties within the Confederacy forced the administration to change its policy, but as with railroad and shipping regulation, action came too late to make a significant impact.

The President has yielded at last on the subject of getting meat from the enemy for cotton. Too late to do much good. When Butler was in New Orleans and Memphis was acceptable for such trade, something worthwhile might have been done in it. Now, it is very much doubtful whether it can amount to much. (32:45)

In this, as in other matters, excessive Presidential oversight led to a weakening of War Department Authority.

The Subsistence Bureau. Lucius B. Northrop, who had encouraged the adoption of the trade policy, was directly below the Secretary and in charge of the Subsistence Bureau. One of the most vilified figures of Confederate history. Northrop has been termed the 'scapegoat of the Confederacy.' He was a West Point graduate who had served in the army until an accidental injury had resulted in a semi-permanent status of indefinite leave; before his accident, however, he had briefly served in the Subsistence Department in 1842 and 1843. Since Northrop possessed a working knowledge of the

functions and operations of food supply, and because Davis considered him to be a man of "practical sense and incorruptible integrity," Northrop was appointed the 'acting' Commissary General until a permanent appointee could be found. After the permanent position was turned down by two other candidates, Davis offered the post to Northrop, who accepted and was confirmed in the Senate by a vote of 44 to 3 (27:6-7). Given the circumstances of Northrop's appointment, subsequent criticism of him as Jefferson's crony seems unfair. Nevertheless, he has gone down in history permanently linked with Davis, and therefore, much criticism of him is in reality indirect denunciation of Davis. His personal unpopularity, combined with the unquestioned failure of the Confederacy to provide adequate sustenance to its soldiers, made him the ideal target for all post-war critics. The barrage of abuse heaped upon Northrop during and after the war has so distorted the Department's record that until recently it has been impossible to find any objective - or in-depth - evaluation of him or his Department's performance. For a brief review of the historical treatment received by Northrop and the subsistence effort, see Appendices A, B, and C. This section presents a detailed and objective analysis of the measures employed by Northrop and the Subsistence Department to meet the sustenance crisis in the Confederacy.

Initial Policies

The activity that first year was chaotic on both sides, but especially so for the Confederates, as they started with much less in the way of organization and military infrastructure. This condition resulted in what historian Allan Nevins has accurately described as the 'improvised war' (37:245). Chapter III has described the concerted effort made to import as many provisions as possible before the blockade began in earnest, and Northrop's attempt to drain the soon-to-be inaccessible border states of all the supplies that he could. His main concern in the first months was to organize his department and contract for as many provisions as he could. Northrop anticipated that one effect of the war would be to drive up prices; to counter this his plan was to corner the entire Confederate food market by wrapping it up with long-term contracts arranged before the onset of inflation.

To combat speculation among the flour merchants of northern Virginia, he refused to pay any more than the Richmond price for flour, less transportation costs, theorizing that since the Washington market was lost to them, they would be forced to accept his arrangements. He fixed the price at \$1 per bushel, explaining "That basis was simply the application of the universally accepted commercial law that the price of any article not at a ruling market [Richmond] must be the price of that market less cost and charges" (53:876-7). He stockpiled large quantities of

flour in Richmond and supplied the army from there by rail, hoping to drive down the price of wheat in northern Virginia. His meticulous adherence to 'commercial law' antagonized the flour merchants, who pointed out that after transportation charges the cost of the flour shipped from Richmond was about the same as that asked in the vicinity of the army (23:19).

Fear of speculation prompted similar attempts to control the meat supply. Again, he tried to avoid letting out bids for competition:

Now, if the usual mode had been adopted of obtaining supplies by bid and contract, it is obvious that, as each speculator or packer could operate most profitably on a theatre of scant supply, and contracts under that system could not have been awarded to all, those who failed to get contracts would have made as much, if not more money, by speculating against the government than working for it. To prevent this it was necessary to combine all the packers in the interest of the Government, and to accomplish that it was necessary to offer them a fair and liberal compensation, placing all on one footing. (53:873)

While these policies may have been good theoretical economics, they did not necessarily promote the military effectiveness of the Confederacy. Army commanders resented the sporadic supply shortages that resulted from dependence on the railroads, especially when surrounded by local abundance, and ordered their unit commissary officers to buy locally, or even worse, appropriate shipments meant for other units. These actions, of course, bred trouble with

the prickly Northrop, especially as the field commissary officers were ostensibly under his control. He wrote to his agents forbidding the practice of buying locally, saying "It is my opinion that as long as the Army can be supplied otherwise no military commander has a right to control the operations of this department except in respect to the staff of his own troops. You and those acting with you under similar obligations have also rights to be respected" (53:1037). Interference continued throughout the war, however, and was a major factor in preventing Northrop from achieving the most efficient redistribution of provisions possible.

In the end, Northrop's attempts at total control of the food markets failed, and the rampant inflation that he feared began to drive the prices relentlessly higher. Lack of funds had prevented him from negotiating early for a sufficient supply, and transportation problems had interrupted the smooth redistribution of provisions from the point of economical purchase to the armies (53:870-875). Private businesses were reluctant to enter into long-term contracts with Northrop's agents because of the spiraling costs brought on by inflation and governmental price restrictions. His initial policies were typical of the Confederacy's approach to the war. He entered the market as just another consumer, and attempted to supply his needs through the standard practice of arranging contracts for delivery. Granted, he attempted to forestall speculation in

foodstuffs by negotiating long-term contracts, but in the first year there is no evidence that he, or any member of the Confederate administration, considered any measures beyond commercial purchase to gather supplies.

Nevertheless, Northrop's original system of economic competition in the marketplace, and his foresight in drawing in all possible supplies from the outer reaches of the Confederacy, had produced satisfactory results for the first year. In January of 1862, Northrop reported to the Secretary that "All subsistence stores that are allowed to the Army have to the fullest capacity of our country been obtained, and no essential supplies have ever failed to be ready for transportation when and where required, timely notice having been given to this department." (53:871-872). The Secretary agreed, reporting to Davis that "No apprehension whatever need be entertained of our ability to feed any number of men that we may think proper to keep under arms from our own home resources" (53:960).

Given a stable economic environment in which to operate, Northrop's theoretical approach would undoubtedly have proven successful. Unfortunately for Northrop, however, the Confederacy was to have neither a 'long-run' nor a stable economic environment. The events of 1862 were to make this evident, and drove the Confederacy to abandon its laissez-faire approach to making war. By 1863, severe military reversals had combined with the disintegration of

the Confederate economy to force the adoption of more authoritarian methods of food procurement.

Provisioning Setbacks of 1862

Military Reversals. The Union military onslaught in the spring of 1862 devastated the Confederate subsistence effort. The forces of the United States wrenched away the border areas, the Mississippi Valley, most of coast and harbors, and subjected large areas of Confederate agricultural land to sporadic destruction. The livestock reserves of Tennessee and Kentucky were now gone, communication with the rich Trans-Mississippi was cut, and blockade running was to become increasingly problematic as the months wore on. The area from which the Confederacy could draw provisions was sharply reduced, and the rail system had begun its inexorable decline. Further, Northrop lost much of his reserve supply in the precipitate retreats and reverses of the year. In addition to the already described losses at Thoroughfare Gap, Northrop was obliged to report large losses at "Forts Henry and Donelson, Fishing Creek and Roanoke Island, and on the retreats from Columbus, New Madrid, Bowling Green, Nashville, and the line of the Potomac" (53:1034-35). Finally, 1862 was the year of the droughts and hog cholera, further reducing the Confederacy's ability to replace the lost provisions.

Financial Collapse. The collapse of the Confederate financial system compounded the effects of the military

reversals. Since Davis had forbidden the export of cotton or tobacco, the only products on the international market on which the fledgling country could base a currency, the Confederates had to resort to more novel methods to achieve financial solvency. Through various European loans, capture of United States currency, and bond drives, one historian has estimated that the Confederacy accumulated a total of \$27,000,000 in hard currency with which to support four years of war (19:198-99). Since the supply budget alone in the first year was over \$39,000,000 (by 1862 it had skyrocketed to \$199,883,726) the Confederacy had to find additional means for supporting itself (53:489). The solution was to run the printing press overtime - an initial issue of \$1,000,000 was quickly followed by \$20,000,000 more, and by the end of 1861 Congress had authorized the additional printing of \$100,000,000 (62:41). The result was rampant inflation and universal distrust of Confederate credit or currency, making it difficult to purchase provisions at almost any price. As the Secretary of War explained to Davis, "The real difficulty is, that the price advancing from day to day with an accelerated ratio and a steady depreciation of the currency, the holders, unless required by positive necessity, prefer to retain their supplies, and will not sell for any temptation of present price" (54:1010).

The Confederate Response

Price Controls. As prices rose during 1862, the government made the first attempts to coordinate purchasing between Bureaus and to protect the government against the unreasonable price levels that had developed on the open market. Price control boards were established for geographical areas to publish official government prices on a periodic basis (54:559-560). This action was intended solely to protect the government against exorbitant prices charged by speculators who attempted to play the various government procurement agencies against each other. Open market prices were not affected by the controls, and the prices paid on the open market continued to soar all during the war. The result was to make it even more difficult for field agents to purchase supplies, because the government price schedules generally lagged well behind the prevailing market price in any given region. John Jones noted the Virginia prices offered by the government on May 21, 1863, and remarked in his diary that "if a large amount of supplies be furnished at these prices - which are fifty, sometimes one hundred per cent. lower than the rates individuals are paying - it will be proof that all patriotism is not yet extinct" (31:217).

In August, when the government offer for flour was \$25.00 per 196-pound-barrel (54:744), he recorded that "speculators have put the price of flour to \$50 per barrel. To the honor of Messrs. Warwick, they are selling it at

their mills for \$35 - not permitting any family to have more than one barrel" (31:254). Evidently not all producers took advantage of the situation, though even this humanitarian price was still \$10 higher than what the government agents could offer. By February of 1864, the Richmond Examiner reported the market price of flour to be \$225 to \$250 per barrel, a rise of almost 500 per cent on the open market (43:75).

Geographical Consideration. As has been shown in Chapters III and IV, aggregate agricultural production was sufficient throughout the war, but transportation inefficiencies and local weather conditions resulted in unequal distributions of provisions throughout the Confederacy. The Confederacy was roughly divided into three zones; as one moved from East to West, food generally became more plentiful. This geographic disparity was to have major implications for the Confederacy as it struggled to attain an equal distribution of food supplies.

The Trans-Mississippi Department. The fertile and relatively unmolested Trans-Mississippi region, for example, was easily the best fed section of the country, a good fortune that included the military forces as well as the civilian population (38:389). However, after 1862 this area was an almost autonomous political unit operating under a completely different set of rules than the rest of the Confederacy.

Because of its isolation, little of the relative abundance of the region found its way to the more destitute sections of the Confederacy, though Northrop never quit trying. As he noted in a report to the Secretary of War after the disasters of 1862, "The Department of the Trans-Mississippi, which last year furnished a very large supply of both beef and hogs, is now deemed inaccessible, or nearly so, though some of the best officers of the Bureau on both sides of the river have been instructed to make combined efforts to place supplies on this side" (54:970).

Northrop was under no illusion that the disjointed and rickety transportation system was capable of directly moving supplies all the way from the Trans-Mississippi to Virginia. Instead, the most he hoped for in his efforts to secure provisions from West of the Mississippi was to initiate a sort of domino effect, so that supplies from the Trans-Mississippi would free up supplies in the deep South, which in turn might relieve the shortages in Georgia and the Carolinas, making it possible for his agents to more easily locate a surplus in those regions for shipment to the army (54:968). Under this theory, each spring there was an attempt to drive cattle from Texas across the Mississippi. As Northrop put it, "if they can meet the demands of the troops in Georgia and South Carolina, so as to save the bacon in those States and furnish from Georgia some surplus hither, all will be realized which should be reasonably expected (54:574).

The Western Front. The middle region of the Confederacy consisted of what became known as the 'western front,' an indication of the insignificance of the Trans-Mississippi to the Confederate mindset. This belt ran south from southern Kentucky between the Mississippi River and the Appalachian Mountains to the Gulf, and included the states of Kentucky (even though not an official part of the Confederacy), Tennessee, Alabama, and Mississippi. The northern fringe of this region was rich in livestock, and the Mississippi basin was a fertile crop-producing area. It was the Army of Tennessee, responsible for this region, that caused Northrop so much trouble by interfering with his procurement activities and appropriating meat shipments intended for the less fortunate eastern areas. A major advantage for the subsistence prospects of this region was that the military front was extremely fluid. Unlike Northern Virginia, no one area carried the full brunt of military depredation, from friend or foe, for an extensive length of time. To the extent that transportation held up, Northrop looked to this region to maintain itself and be a net exporter of provisions to the food-poor eastern Confederacy, but the interference of the commanders of the Army of Tennessee confounded his arrangements. In January of 1863, he complained to the Secretary that:

The comparatively small district of East Tennessee now affords a greater relative amount of subsistence for General Bragg's army [of Tennessee] than do Virginia and North Carolina for the armies

in those States, respectively. I therefore earnestly recommend that General Bragg be instructed to subsist his army from the resources of the country he defends, and be forbidden to stop the passage of hogs to Major Cummings, who has made arrangements for converting them to bacon [and shipping them east]. (54:351)

Here the compromised authority of the Secretary (by now the Confederacy was on its third) prevented him from issuing a direct order (Bragg was one of Davis' favorites), and instead he contented himself with weakly suggesting:

Unless the needs of your Army imperatively require the retention and present consumption of these hogs, I recommend the withdrawal of all impediments and prohibitions to their removal. It is hoped that it may be practicable for you at least in large measure to subsist your Army on the provisions remaining in your Department unappropriated by the General Commissariat. (23:82-83)

The effectiveness of this relaxed nudge hint may be imagined. Not only did the Army of Tennessee withhold foodstuffs, it began withdrawing food from a central depot in Atlanta. In June, Northrop complained again to the Secretary that Major Cummings had been "peremptorily ordered" by the army's commander "to stop everything else until he had supplied his army. He also furnishes a memorandum of the shipments made to that army [from Atlanta] in the month of April, as follows: 1,010,910 pounds of bacon, 102,055 pounds of cured beef, besides 923 head of beeves. This occurred while it was a critical question if General Lee's army could get provisions to hold its

position" (54:574). In spite of repeated complaints by the Commissary General, interference by military commanders with the policies of the Subsistence Bureau continued throughout the war, and not only in the provision rich western areas.

The Eastern Front. The third portion of the Confederacy was the Atlantic seaboard south from Virginia, and east of the Appalachians. Here the populations were relatively dense, with large (for the South) urban areas, and an agriculture initially oriented around export crops such as tobacco and cotton. Though the conversion effort to food crops was widely supported and eventually successful, it took time, and by the time agriculture in the East had realigned itself, the setbacks begun in 1862 mitigated against self-sufficiency. As a result, along the eastern states there were periods of real hardship, at times bordering on starvation (43:44-50). The shortages focused on the cities and the armies, where large numbers of people were dependent on the railroads to transport provisions from the more productive and less harassed districts.

In the cities, the results were the famous 'bread riots' of the Confederacy, the largest of which was in chronically troubled Richmond, but were also experienced in North Carolina, Georgia, and Alabama (21:165-165). It was the effect of shortages on the Army of Northern Virginia during the winter of 1862/63, however, that ultimately revealed to what degree the subsistence problems of the Confederacy had grown, and were the final factor leading to

the passage of comprehensive regulations in 1863. For Lees's army, operating as it did in the provision wasteland north of Richmond, the cold season brought a continually shrinking ration. The railroads simply could not handle the load under the existing lack of management, as the Secretary noted in March to Railroad Superintendent Wadley:

Sir: The dilatory and irregular transportation on the railroads is really matter of suspense as well as serious anxiety to me. It is essential that transportation of supplies, especially meat for the armies in Virginia, should be more rapid and regular. I learn from the Commissary General that though since the 1st of January he has been urging the transportation of meat from his reserves at Atlanta to this city [Richmond], he has not received in all more than some 400,000 pounds. Some general plan, it seems to me, is necessary to counteract the increasing delays and irregularities . . . I had supposed this course had long since been pursued, as it seems to me manifestly required to give full efficiency to the railroad facilities . . . (54:457)

As shown in Chapter IV, no 'general plan' to coordinate the railroads was forthcoming, and the 400,000 pounds represented Lee's entire meat allotment from the 1st of January to March 25th. Northrop was required to reduce Lee's meat ration to one-quarter pound per day when available, and planned to substitute sugar (reminiscent of the coffee-for-meat scheme described earlier) when meat was not available. Even at the reduced ration, meat was often not available that winter. For an army of 50,000, the 400,000 pounds that were shipped comprised only 32 days issues over the three month period. Understandably, Lee

resented his army being singled out for the reductions, especially in light of the large requisitions the troops in Tennessee had drawn from the same Atlanta depot. He therefore refused to enforce the cuts. By now, Northrop was losing his patience with interference by general officers, and pontificated to the Secretary:

Sir: The intervention of commanding officers with the ration is unauthorized and unadvisable for many reasons; but under existing circumstances it is mischievous. The subsistence of the different divisions of the Army should be, if possible, from the productions of the districts wherein they respectively operate; more especially is this necessary in the present condition of transportation. The condition of the country requires that the ration must necessarily vary in different localities. It is not to be expected, and it is not the fact that commanding generals are most competent judges of the subsistence resources of the country, and should not be permitted to issue any order respecting rations whatever Action by commanding officers only tends to render the Army dissatisfied or cause a too rapid consumption of supplies. (54:414)

Government Appeal. In this case it appears that Northrop was right; Lee's troops ate all the reserves that were available, and by April, a crisis of the first magnitude appeared imminent. John Jones, the 'Rebel War Clerk' who was later to complain about governmental sloth in completing the Piedmont Railroad, wrote to the President suggesting that if the soldier's "parents and sisters were appealed to and transportation be furnished a sufficiency of food in this way could be obtained to prevent any suffering." This radical overture did not fit in with

Northrop's system, and he endorsed the proposal with characteristic pessimism, "The Commissary-General has no experience as to this mode of raising supplies and does not think it a promising one, and respectfully addresses it to the Secretary of War, if he wishes to direct it." The Secretary also disapproved, saying "It is not deemed judicious unless in the last extremity to resort to the means of supply suggested (54:405). The 'last extremity' appears to have arrived on April 10th, however, and at the request of Congress, Davis published an address to the people asking them to relieve a temporary shortage of provisions by following a plan for sending in contributions and agreeing to sell provisions to the government at reasonable rates (OR IV,2:468-477). This all sounded suspiciously familiar to Jones, who noted in his diary:

Appended to this is a plan, "suggested by the Secretary of War," to obtain from the people an immediate supply of meat, etc. in the various counties and parishes. This is *my* plan, so politely declined by the Secretary! Well, if it will benefit the government, the government is welcome to it; and Mr. Seddon [the Secretary] to the credit of it. (31:188)

No doubt Mr. Jones took solace from the success of the appeal. Lee's army scraped through the winter, and on June 29th, Congress announced "having provided the means of procuring army supplies, notice is given to the people" that voluntary contributions would no longer be necessary (54:611-12).

Ironically, there was a bright side to the debacles of 1862. Sudden destitution, coupled with the growing realization that the war would be a prolonged one, to be decided in part by the efficient and comprehensive mobilization and use of resources, forced the Confederate administration to rethink its supply policies. The moment for what Allan Nevins calls "the organized war" was at hand (37:245). This reorganization took place on two levels; Congress authorized sweeping new powers to the War Department in its struggle to procure supplies, and Northrop reorganized his department to take advantage of the new opportunities.

The Tax-in-Kind. The first measure passed by Congress was a stringent tax bill, passed on April 24, 1863, in an attempt to finance the war and provide support to armies in a better way than by wearing out the printing presses. For the Subsistence Bureau, the most important segment of this act was the Tax-in-Kind, or tithe. The tithe was to become the backbone of the subsistence effort for the remainder of the war; it cut through the Gordian Knot of inflation, speculation, and hoarding by simply taking ten percent of the country's subsistence stocks as taxes. Predictably, the tithe was destined to become one of the most controversial measures ever enacted by the government, trailing only conscription and impressment in general unpopularity (62:42).

As implemented by the War Department, the tithe worked as follows: As the market time for a particular crop approached, a local tax assessor would estimate the quantity owed by each individual in his region. In making this estimate, the assessor would first set aside a certain portion (at first, a year's food supply, but this decreased to six months, then three, later in war) before applying the tax to the remainder. In case of disagreement with the assessor's estimate, producers could call on an impartial third party to adjudicate the dispute. Once the tax was determined, farmer was to deliver the produce within two months to the nearest government depot or collection point, or face a fifty percent penalty (54:519-520).

Obviously, the potential for the abuse of such a system was large, and much of the popular outcry against the tithe was spawned by corruption and inequities in its application. Unauthorized agents collected the tithe from unsuspecting farmers, issuing false receipts and reselling the provisions at a large profit. Authorized agents were accused of speculating in the sale of products under their care (55:801). Further, the tax was levied unequally. Agents found it easier to collect produce from farms closest to the railroads; as a result, some farmers were called on repeatedly, while others more distant might never see the tax-in-kind man (62:42).

While the tax-in-kind offered a much-needed source of collections, it was not to be the panacea its sponsors had

hoped. Since the spring butchering season had just passed when the tithe came into effect, there were very little meat collections for the first year. In the next packing season, the opposite occurred. Many meat producers elected to pay their tithe as soon as their animals were slaughtered to save on the expense of salt, and were parsimonious on the use of the preservative on meat they planned to give to the government. Northrop reported that, although "There is also a very considerable amount secured by the tax in kind,"

The tithe meat has been much of it paid in as soon as due by parties who wished to save the loss [from spoilage] that would result from keeping it longer. A great deal of meat so paid is understood to be imperfectly salted and smoked and to be accumulating at points in the interior where it cannot be properly taken care of and whence it cannot be removed, at least with sufficient dispatch, for want of transportation. How far these causes may operate to cut short the supply cannot be estimated. (54:379)

The bulk of the grain collections came from the deep South where conversion was taking hold; Virginia, subject to war devastation, was able to contribute virtually nothing. John Jones recorded in his diary that the "tax is a failure, in a great measure, in Virginia. It is said that only 30,000 bushels of wheat have been received! Such is the scarcity of provisions, that rats and mice have mostly disappeared, and the cats can hardly be kept off the table" (31:319).

So the tithe, while it accumulated large quantities of stores, did little to immediately address Northrop's biggest problems: shortage of meat, and dependence on the railroads. Jones records that when Northrop submitted his estimated budget for 1864, he took "no account of the tithe, nor is it apparent that he estimates for the army beyond the Mississippi" (31:302). As far as Northrop was concerned, the Trans-Mississippi Department was on its own.

Imperfections notwithstanding, the tithe contributed abundantly to the subsistence of the Confederate armies after its inception in the spring of 1863. The tithe brought in almost 30,000,000 rations of flour and 50,000,000 rations of corn meal, enough to feed 200,000 men for one year. In addition, there was enough corn to feed 130,000 animals for one year, and enough hay and fodder for 35,000 animals. Even after subtracting that part of the tithe already distributed, and that purchased by civilians or distributed to industrial workers, and allowing for spoilage and waste, the Subsistence Department estimated that three-quarters of the tithe collections actually went to the army (55:801-802). With Northrop projecting field armies of around 400,000 for the coming year (not including the orphaned Trans-Mississippi), the tithe could be counted on meeting almost half the subsistence requirements of the Confederacy (31:302). As historian Frank Vandiver concluded, "The tax-in-kind was an evil necessity which harmed the cause and yet sustained it" (62:42).

Impressment. Another 'evil necessity' that sustained the Confederacy - and harmed it even more than the tax-in-kind - was the policy of impressment. Under that policy, authorized agents were empowered to force private individuals to sell supplies to the government. While the tax-in-kind raised large amounts of provisions and became the primary source for the subsistence department, the problems described earlier made it necessary for Confederate authorities to supplement it on the local level with enforced sales. While sporadically used earlier in the war to meet temporary emergencies, by 1863, widespread use of impressment powers on a routine basis became necessary to simply maintain a minimum ration. After announcing the end of the emergency appeal for rations, the Congressional Proclamation of June 29, 1863 went on to say "Hereafter supplies will be obtained, as far as practicable, by purchase, and when necessary by impressment; and officers, when authorized to resort to impressment, will observe strictly the requirements of law and the general orders of the War Department and the regulations of this office founded thereon" (54:612).

The government tried to make its confiscatory activities as painless as possible. Officials paid on the spot the high prices prevailing on the market (not the low government schedule rates), handed out receipts, and made reports to Department heads. As with the tithe, the law stated that "No officer or agent shall impress the necessary

supplies which any person may have for the consumption of himself, his family, employees, slaves, or to carry on his ordinary mechanical, manufacturing, or agricultural employments" (54:471). The following letter is typical of those given to farmers in areas of need:

Sir: I propose to purchase in behalf of the Confederate States of America the sorghum, molasses and surplus corn, bacon, lard, and pickled beef now on your hands belonging to yourself or others, and hereby offer you for the molasses \$4 per gallon; corn, \$2.50 per bushel; bacon sides, \$1; hams, 90 cents; shoulders, 85 cents; lard, \$1; and pickled beef, 50 cents per pound, in currency. Should you decline the price offered, I will be obliged to impress the said property; in which case compensation will be made according to the act of Congress for the regulation of impressments. This is sufficient notice under the act to bind the said property until the completion of the negotiations, so that there can be no removal or transfer of the same. (54:405-6)

Although the government was authorized to impress almost any medical, quartermaster, or ordnance stores, it was the extensive and persistent seizure of food that provoked the most outrage.

For Northrop, impressment and the tithe were absolutely necessary to maintain the effectiveness of his Bureau, but they also presented some administrative difficulties. One major problem was that fear of impressment made food almost disappear from local markets. Stories circulated of farmers intercepted on the way to town who lost not only all their produce, but their horses and wagons as well (22:48-50).

One of Northrop's agents wrote him explaining how impressment had altered conditions in his district:

The effect of this course of conduct has been that the poor of the country, the people of the towns and cities, many of them refugees from States now in the hands of the enemy and from our own sea-coast, are absolutely in want of the necessaries of life, which can only be purchased at ruinous rates; and the reason is that these circulars have deterred many citizens from selling a bushel of meal or flour to the needy at home, and from bringing it to the cities, towns, and villages, through apprehension of interference by impressing officers. (55:404)

To locate and retrieve the increasingly difficult to find provisions, Northrop needed more men than he had deployed before to simply arrange and carry out commercial contracts. Unfortunately for his efforts, the Subsistence Department had a low priority, and Northrop always had trouble obtaining sufficient reliable and honest men to carry out the new procurement policies. By 1863, almost all able-bodied men were already in the army or had obtained exemptions, Northrop was generally left with the army's rejects. This contributed to the abuses suffered by the population in the implementation of the tithe and impressment. As Northrop noted in a Subsistence Bureau circular, "When enacting laws for impressment Congress could not have expected impressing officers as a class to be competent to settle the meaning of the words "value or just compensation, since jurists and political economists have been unable to determine on a definition or principle of

ascertaining the just value of an article." To solve the problem of valuation determined by incompetent or unfair officials, Congress resorted to its old expedient of publishing official price schedules for use in reimbursement (55.822).

Reorganization of the Subsistence Bureau. With the advent of the tax-in-kind and impressment, Northrop determined that a reorganization of his department was necessary to best implement the new procedures. At the beginning of the war he had divided the various military departments into purchasing and collecting districts, but this had proven unsatisfactory because of the competition of purchasing between Commissary agents and local purchasing by army commanders. Under the new plan, the organization by military district was scrapped, and a Chief Commissary appointed by Northrop directed all purchasing in each state. Each state was divided into districts, and each district into subdistricts, each with its own purchasing agent. The Chief Commissary for the state collected reports of purchases, prices, and accumulations of supplies from his subordinates every ten days, consolidated them, and forwarded them each month to Northrop. But while the administration of purchases was now centralized in a pyramidal hierarchy, the distribution of supplies was decentralized and streamlined.

Arrangements for depots and warehouses were made, now with "due regard for convenience in relation to

transportation." No more shuttling provisions back and forth from a few central locations chosen with regard more to 'commercial law' than to the limiting factor of transportation. Army commissary officers did not have to send to the central office at Richmond for requisitions, they now applied directly to the Chief Commissary of the states in which the armies were stationed or intended to pass. In addition, commissaries of one state or district could draw directly on the reserves of another, increasing the flexibility of the system.

Northrop was hopeful that the new system would solve the problem of interservice competition and promote a more efficient collection and distribution of provisions, writing "When this system is thoroughly organized and worked there will be no portion of the Confederacy which is not thoroughly drained, and therefore wherever our armies move all the supplies of our country will be tributary to their use; and then application will be made to prevent army commissaries from competing with this Bureau's commissaries or agents, and the chief commissary of each army directed to supply his wants by application to each chief State commissary" (55:290-292).

Interference by Combat Commanders. The competition for food between Bureau officials and commissary officers attached to local military units was a major headache for Northrop in his effort to redistribute provisions equally to

the various armies. The problem stemmed from the western front in Tennessee, where supplies, especially the scarce meat products, continued to be available to some degree all during the war. Northrop depended on that region to supply the bulk of the meat ration for the impoverished troops on the eastern front, but commissary agents belonging to the Army of Tennessee scoured the area paying exorbitant prices in inflated currency, driving up prices and making it difficult for Northrop's agents to locate provisions. That type of action had been a major contributor to the food crisis of the winter of 1862/63, and it was to rectify the problem that had been one of the primary purposes of the reorganization.

Unfortunately for Northrop, his plan depended on the strong support of the Secretary to force the army commanders to allow Northrop's agents free reign to gather supplies without interference, and as has been seen previously, the Secretaries were institutionally unable to exercise vigorous control over military commanders. In this instance, the Secretary contented himself with 'asking' commanders to give Bureau officers "all countenance and co-operation, and to make the operations of his army officers conform to their standard prices," and to continue with their local provisioning only if they determined that they enjoyed "superior advantages for establishing Depots and making accumulations. With this general guiding view, I trust you will have no difficulty in operating harmoniously and to the

advantage of the service with the Commissary General and his officers" (23:85). Little could be expected of military policy based on cooperation rather than direction, and the Secretary was to be disappointed in his hope for harmonious cooperation. In his diary, Kean described the Secretary's efforts at controlling the field generals:

Indications of famine thicken. The Commissary General is in low spirits and looks haggard. The truth is the Secretary has been too deferential to the army officers. They have thwarted whatever of policy was then in supply, . . . and Mr. Seddon [the Secretary] has 'recommended, to the favorable consideration of' where he might and should have given instant orders. The Department has been energetic only in the very doubtful policy of impressments. (32:47-48)

Messages continued to arrive in Richmond from Northrop's agents complaining of interference by army commissary officials, who procured supplies with no thought of the situation beyond their local areas. A typical complaint received in 1864 (a full year after the reorganization and the Secretary's 'request') from one of Northrop's frustrated agents describes the activities of a Major King:

He has purchased about 400 poor cattle, agreeing to pay for them the maximum of the old schedule, in some cases paying 30 cents, paying no attention to the scale of prices. The question is, has Major King or myself the management of purchases in this district? He desires, he says, to secure for his department provisions which will not be forwarded to other commands. He is simply looking out for his own troops by making purchases through his own commissary and agents. (55:290)

As a result of this type of short-sighted interference, and the inability of the Secretary to control his generals, Northrop was unable to forward more provisions to the troops in the East, who remained on reduced rations.

Subsistence Breakdown

With Northrop's reorganization, and the addition of the tithe and impressment, the policies of the Subsistence Bureau had assumed the form they were to keep for the duration of the war. Northrop continued to push for liberalized policies concerning overseas trade, but reform came too late to make a significant difference. As the war moved through its final year, all the factors described above combined to result in an ever decreasing ability of the Subsistence Bureau to meet its commitments. By the end of the war, the Army of Northern Virginia hovered in a perpetual state of semi-starvation. Northrop, embittered by military interference with his policies and lack of support from above, hamstrung by a shattered transportation system, and operating in an environment of economic collapse, seems to have given up the struggle.

Diarist Robert Kean, head of the administrative section of the War Department, witnessed the incident that led to Northrop's dismissal. It provides a vivid picture of the despair pervading the War Department at the end, and the utter inability of the Confederacy to provide subsistence for its troops.

On the 8th [of February, 1865], General Lee wrote that his troops beyond Petersburg had been in line of battle three days and nights in snow, hail and rain *without a mouthful* of meat; that they would be so weakened by exposure and privation as not to have the physical strength to march and fight. It gave the saddest picture of the sufferings of the soldiers I have ever seen. Colonel Northrop was present when General Breckinridge [Secretary of War] received it and he showed it to him. 'Yes,' the old stoic remarked, 'It is just what I predicted long ago.' And he went on to rehearse the record without a single suggestion of relief. General Breckinridge inquired, 'But Colonel, what shall we do?' 'Well, I don't know. If my plans had been carried out instead of thwarted etc., etc.'

The Secretary sent the letter up to the President, who presently returned it with a very sharp endorsement to the effect that this was the result either of gross incapacity or criminal neglect, and soon after, the President wrote the Secretary a note that meat and whiskey must be borrowed, or impressed, and should be sent over before the commissary officers slept that night. This, too, Colonel Northrop saw but laid coolly aside, remarking to Lawton *soto voce*, that it was 'sensational'; to the Secretary that he could not borrow because he had already borrowed more than could be returned, nor impress because by law the money had to be tendered; that it was partly General Lee's fault, and wholly Mr. Seddon's [previous Secretary of War] etc. And no suggestion of any means of relief was so much as offered by him. This probably hastens his fate which was sealed before. (32:200)

The situation in the army was fast becoming critical; the desertion rate in the last months of the war was so high that one regiment eventually surrendered with only one officer and 12 enlisted men (7:30). Lee had earlier written giving his perspective of the provisioning problem, saying, "There is enough in the country, I believe, if it was properly sought. The proper remedy is increased effort, greater experience in business and intelligent management."

It may be that all is done that can be, but I am not satisfied that we cannot do more" (50:1143). Now he no longer believed greater effort would be sufficient. He wrote to the Secretary to say, "If some change is not made, and the Commy Dept. reorganized, I apprehend dire results" (49:381). Within a week, Northrop had been removed and the highly popular Isaac St. John appointed to replace him.

The spirit of optimism following the shake-up produced positive results for a period, but there was a limit to what the new enthusiasm could accomplish. The war had only two months to run, and for the most part St. John simply continued Northrop's policies. He realized that the Department's problems stemmed from errors in economics and logistics, rather than in administrative efficiency or quality of management (27:20-21). As he commented after the war to Lee in June, 1865:

I feel it my duty to add as one who was ordered to an unwelcome duty at a singularly unfavorable moment, and therefore in no manner committed to the controversies of the Commissary Department - That my own adverse opinion founded on public report was greatly changed upon personal observation. Among its officers I found some of the finest men of the service - in ability, vigor, and devotion. They were contending under Extreme disadvantages with the nearly Crushing Embarrassments of an insufficient supply of purchasing funds, and very deficient transportation. Otherwise, their record would have been very different. (23:235)

Conclusion

St. John's informed assessment, however, was not to be the one that dominated historical writing in the first 100 years

after the war. The repeated severe food shortages during the war has brought sharp criticism to the entire Confederate supply chain of command. For a detailed account of the historiography of the Confederate Bureau, see Appendices A, B, and C.

The collision of fiercely held theory with military necessity were at the root of the Confederacy's sluggishness in adapting to the new realities of total war, and occurred at all levels of the civil administration, not just at the junction of the War Department with the President. Indeed, the history of the administration of the supply effort can be written in terms of the gradual awakening of the individuals involved in that effort to the fact that there could be no lasting military success until adherence to idealistic principle gave way to practical necessity. The further up the chain an individual was placed, that is, the more distant he was from the actual events he was attempting to control by theory, the longer it took for reality to filter up to his level and alter his opinions. The slow progression of this awareness up the chain can easily be traced from the lowly foot soldiers to Northrop at the Subsistence Department, to the Secretary of War, and finally to the President.

The suffering in the army after the battle of Bull Run had quickly convinced the military leaders that a more firm control of the nations resources was necessary, but Northrop

was too enamored of his ideas of economic competition to agree. As one historian wrote, "To the officers at Manassas, it was just too strangely theoretical to watch local farmers load their flour on cars to be sent to Richmond, while carloads of government flour, some originally from the vicinity, arrived regularly from Richmond" (23:19). Eventually, as has been shown, Northrop was forced to drop this policy and by 1862 began his letter-writing campaigns for the nationalization of shipping and railroading, broad impressment powers, laws prohibiting the production of cotton, and the like. By 1863, the Secretary of War had become convinced, calling for government regulation of the railroads, for example, but Jefferson Davis refused to be persuaded until the spring of 1865, at which point it was too late.

To focus on Jefferson Davis' reluctance to change is to recognize only that he came at the critical point in the education process, the point at which the meager resources of the Confederacy crossed the line from being sufficient to maintain the war if completely mobilized. Critics of Jefferson Davis are probably correct in saying that his stubbornness severely jeopardized, if not killed, the war effort; they are probably wrong, however, in implying that things would have turned out differently had anyone but Davis been in charge. Certainly there were exceptional individuals who may have acted differently, but Davis himself was thoroughly typical of his day and milieu.

Unless the very orthodox Southerners had managed by chance to hit upon a very unorthodox leader, the Confederate war effort was doomed to be pursued in a very fragmented and decentralized manner. As one historian has observed, "One cannot imagine the Confederacy, a slaveholding regime based on states' rights and individualistic doctrines, maintaining any other ground than that which its history reveals" (64:15). Because of resource deficiencies and attitudinal constraints, the gap between what was necessary and what was possible was too large for any reasonable expectation of long-term success.

VI. Concluding Analysis

Mr. President: It is with great pain that I announce to Your Excellency the surrender of the Army of Northern Virginia. The operations which preceded this result will be reported in full. I will therefore only now state that, upon arriving at Amelia Court-House on the morning of the 4th with the advance of the army, on the retreat of the lines in front of Richmond and Petersburg, and not finding the supplies ordered to be placed there, nearly four hours were lost in endeavoring to collect on the country subsistence for men and horses. This delay was fatal, and could not be retrieved We had no subsistence for man and horse, and it could not be gathered in the country. The supplies ordered to Pamplin's Station from Lynchburg could not reach us, and the men deprived of food and sleep for man days, were worn out and exhausted .

With great respect, your obedient servant,
R. E. Lee, General.
(50:1265-1267)

Overview

The Confederate military experience, specifically the subsistence effort of the Confederacy, serving as a laboratory where we can observe various approached to logistics problems and their consequences, helps us to derive a broader understanding of the tradeoffs and consequences inherent in the alternative allocation of the scarce logistics resources of a military unit. From the very start, the Confederate war effort struggled to catch up to 'what might have been.' The inability of the Confederacy to carry all 15 Southern states into secession denied to the Confederacy large productive areas and the greater part of the modest industrial capacity of the South. In addition,

it left the most productive agricultural and industrial regions of the seceding states perilously exposed to the Union. The very size of the country worked against the Confederacy. Haphazard procurement policies developed in the highly productive and confined spaces of Europe were less effective in the dispersed and still semi-wild South. The supplies of beef cattle in Texas were as remote to Northrop in Richmond as provisions in Madrid would be to military planners in Berlin. When the undependable nature of the Southern railroads are factored into the equation, the magnitude of the Confederate subsistence problem becomes clear.

Inadequate Comprehensive Planning

Though scanty resources demanded aggressive planning and centralized controls, the Confederate leaders never developed a comprehensive plan to address the problems presented in the first modern war. More important, creating a centralized bureaucracy to allocate resources for the general welfare was antithetical to everything for which the Confederacy stood. Nor would Confederate citizens, who had taken pride in their libertarian philosophies, have submitted to any such intrusions of national authority. Still, while the politicians could not have been expected to create a coldly efficient war machine, they could have attempted a careful estimation of available resources and mapped out a strategic plan to husband those resources and

make the best possible use of them in their pursuit of independence. Confederate leaders liked to compare their situation with that of the founding fathers; in their idealistic fervor, however, they failed to recognize the harsh fact that the advancing technology of warfare inaugurated by the industrial revolution had rendered the hand-to-mouth approach to logistics of the Revolution obsolete.

There is no evidence that civilian and military leaders ever collected together to consider effective plans and programs to coordinate the massive logistics problems they faced. In fact, it does not appear that they even considered logistics a primary factor in their military capability. Northrop and his peers in charge of the various supply Bureaus were commissioned only as Colonels, a fact that contributed mightily to his problems in controlling interference by field generals with his subsistence arrangements. In the beginning, most Confederates hoped for a short war; as that mirage faded, they did not plan any comprehensive approach to effectively mobilize the nation's shrinking resources effectively. Instead, as the conflict developed to a war of attrition on an unprecedented scale, the leaders were forced to react to circumstances in a stop-gap and uncoordinated way to simply keep the fighting going. As a result, by the end of the war the Confederacy had assumed many of the features of a centralized state, but these characteristics came too late to solve the original

crisis that had precipitated them. Instead, they fostered resentment and discouragement in the populace, and often only aggravated problems, rather than solve them. Prevented by their ideologies from immediately devising a comprehensive program for the management of Southern resources, Confederate leaders attacked the symptoms, but not the root causes, of their logistical decline.

This analysis has been arranged around the interdependent triad of agricultural production, transportation, and logistics administration. It would be tempting to single out one of these to credit with the breakdown of the subsistence effort, but the facts indicate that, while not any one of the factors was fatal alone, taken together they combined synergistically to overwhelm Northrop's Bureau. In each area the Confederacy entered the war with significant handicaps that would require action to prevent degradation of subsistence potential. In the agricultural arena that handicap was an overwhelming dedication of productive land to cash rather than to food crops; in the transportation area it was the uncoordinated and fragile railroad system, and in the administrative arena it was philosophical background of the Confederacy. To the degree that progress was made in addressing or circumventing those shortcomings, the demands placed on the other two areas were lessened. Conversely, failure to adequately address a deficiency in one area placed an even greater

strain on the remaining two; as a result it becomes difficult to determine between proximate and ultimate causes of the subsistence decline.

Agricultural Policies

Overall, the effort in the agricultural area appears to have been adequate. Starting with an overwhelming dedication to cash crops, Southerners were able to convert enough acres to food production to sustain both the armies and the general populace. National appeals for voluntary conversion and prohibition were enough to encourage sufficient production of foodstuffs. Declining agricultural capacity due to territorial losses, speculation, meat spoilage due to lack of salt, and loss of supplies to capture, for example, all decreased the aggregate stock of provisions available, but there was never too little to meet overall requirements. The effect of the reductions was to require the Confederacy to operate with maximum efficiency in drawing available supplies from producing regions and redistributing them where needed. Also, it was necessary to reject economic and political dogma and supplement domestic procurement with international trade. The entire Confederacy would have to be gleaned for all available surplus foodstuffs. This in turn placed a premium on dependable transportation and flexible, effective, logistics administration.

Transportation Policies

The effort to build an effective transportation network must be rated no better than marginal. Beginning with a disjointed system barely adequate in the best of circumstances, the network was allowed to rapidly decline due to a range of factors - from economic and political attitudes to lack of industrial capacity. Beyond the physical deterioration was the wasteful use of the capacity that was available. Use of cars as storage facilities, shuttling of provisions back and forth from remote depot locations, dedication of large amounts of capacity to civilian traffic, and probably most damaging of all, refusal to force relocation of engines and rails to strategic routes, all rendered available capacity less efficient. Almost identical strictures prevailed in the shipping - or blockade running - industry. Substitute the constraining effect of the tightening Federal blockade for the physical decline of the railroads in reducing capacity, add the dedication of cargo space to luxury imports, and the pattern of declining and wasted capacity is repeated. The result was a slowing down of shipments from producing to consuming regions, and a huge investment in pipeline goods at any given time. Widely dispersed agricultural production, combined with an undependable and slow transportation system, demanded a highly efficient management of Confederate logistics and subsistence programs to stretch available resources out to the fullest possible extent.

Administrative Policies

National Policies. The administration of the Confederate Subsistence Bureau occurred within the context of Confederate management of overall logistics issues. The primary means of tapping national economic power was through appeals for voluntary cooperation. The effectiveness of these appeals varied, depended on the sector of the economy being addressed. The patriotic campaign for conversion of agricultural land to food products and the call for prohibition were generally successful; calls for self-regulation or voluntary cooperation by the railroad industry, while applauded verbally, often failed of substantive results. No doubt the variation in success is ultimately due to the latent strengths of the respective sectors of the Southern economy. But when appeals for voluntary cooperation proved insufficient, the national authorities were incapable of implementing more authoritarian measures until the situation was beyond retrieval. Here the genius of Lee and the general combat effectiveness of the Confederate military may have provided an ironic disservice. Obscured by battlefield triumphs, Confederate military might was rotting away from the inside virtually unrecognized by any authorities higher than the Bureau chiefs.

In addition to tardiness in implementing comprehensive measures to focus economic power onto military applications, the national authorities further compounded the difficulties

faced by the Subsistence Bureau by allowing the financial base of the country rest on nothing more substantial than overactive printing presses. Progressive deterioration of the fiscal structure of the country produced a galloping inflation which forced reliance on forced sales at fixed prices to pry the ever more valuable goods from the hands of speculators. This in turn caused hoarding and resistance, resulting in a further decrease of supplies for the armies in a country that was still agriculturally productive.

These factors were outside the scope of the Subsistence Bureau to correct, but they need not have been outside the influence of the War Department as a whole. As the element of the government most directly dealing with civilian business on a daily basis, the Department was ideally situated to monitor the detrimental effect governmental policies were having on the national economic pulse, as well as how those effects were relentlessly being translated into reduced military capability. But while the information continually flowed into the Department, it never seemed to flow on out up the chain. Because of rapid turnover and the Presidents autocratic style, the office of Secretary of War never acquired the influence needed to become a powerful advocate of the logistics perspective. Instead, it became a powerless intermediary between the aggressive pragmatism of the bureau chiefs and the entrenched conservatism of the President. Priority deferred to the manpower needs of the

field generals; the civilian sector was stripped of the workers necessary to maintain productive capacity, and the Subsistence Bureau was left with too few and too inept a staff to pursue its policies in a fair, vigorous manner. For all these reasons, national administration of the logistics effort and the economy can only be described as poor.

Subsistence Bureau Policies. Operating within these constraints, the administration of the Subsistence Bureau would appear to have been fair to good. The Bureau has traditionally been considered the black sheep of the Confederate war effort, but unjustly so. Complaints have usually centered on the personality of its chief, or around such seeming contradictions as putting the armies on short rations while food was rotting on wharves or in the lower South. Strangely, the ad hominem argument may have more validity to it than the other. By all accounts, Northrop was not the easiest or most flexible man to work with. He could be stubborn, cantankerous, and pessimistic. There were undoubtedly more popular, energetic men better capable of inspiring the public's confidence; to this extent the Bureau could have been better managed. But in the daily disposition of his affairs he seems to have been reasonably efficient, and even to have shown a degree of insight and ingenuity rare in the Confederacy. He was an early advocate of such measures as trading cotton for food and government management of the railroad and shipping industries, and

attempted to forestall the negative effects of the loss of territory by concentrating his efforts on exposed areas. It is true that meat spoiled in storage and in transit, but this is more a commentary on the reliability of the railroads than on the efficiency of the bureau.

A better criticism of his arrangements was his obstinate insistence on centralized purchasing and warehousing in the first years of the war. To his credit, however, when it became apparent that his system placed too great a reliance on the railroads, and fostered ruinous competition with field commissary officers, he reorganized his bureau for greater effectiveness. Any other Commissary General would, like Northrop, have been confronted by circumstances beyond his control. Breakdown of the railroads, loss of productive areas, and economic chaos were uncontrollable factors that hamstrung his provisioning policies. Worse, any plan he devised to ameliorate or circumvent these factors was doomed through the ineffectiveness of the War Department in advocating its requirements. Constrained at home, Northrop continually hounded his superiors for permission to trade through the lines, and made arrangements with blockade runners to secure meat from overseas, but again, his plans were impeded by resistance from above. Based on the evidence, he appears to have been a good administrator who devised procedures that were logical and effective up to a point; that point being

the delivery of subsistence to the railroads. From there his control ceased until delivery of the goods either directly to the army or into field warehouses.

In summary, then, the subsistence troubles of the Confederacy stemmed from a plethora of conditions outside Northrop's control. It is unlikely that anyone else could have done much better under the same set of circumstances. Barely adequate, but scattered agricultural production, marginal railroad efficiency, together with poor management, coordination and support on the national level, swamped any policies or procedures promulgated within the Subsistence Bureau. The result was an ever decreasing ration, with intermittent periods of extreme hardship for army and civilian populace alike.

A Contemporary Perspective

In concluding this review of the Confederate subsistence effort, it seems appropriate to point out some of the 'lessons' that may be learned vicariously through their experience.

1. A fundamental flaw in the Confederate military effort was the lack of congruence between military strategy and logistics management. The essentially defensive military strategy adopted by the Confederates made a long-term war of attrition inevitable. However, they neglected to coordinate a logistics strategy appropriate to supply the resources necessary to maintain such a war. Almost invariably,

competition between supply and combat units for scarce resources was decided in favor of the combat units, with the result that Confederate military power eroded away from the inside rather than from military reversals in the field. Granted, the growing logistics requirements of warfare in the newly industrialized world were unknown by either side at the outset of the war, so these allocations were made more by default than by any conscious deliberations. Nevertheless, whether made through ignorance or error, the effect of those allocations on the long-term combat effectiveness of the Confederacy are clear.

Sustained military power is no longer simply a function of combat prowess. To ignore logistics requirements and capabilities in determining national military strategies, or to plan national military strategies without coordinating a congruent logistics strategy, is to undermine long-term military strength. In today's shifting climate away from the quick-strike potential of nuclear weapons towards greater reliance on logistics-dependent conventional warfare, the necessity for an appropriate reexamination of logistics strategies is clear.

2. An awareness of the necessity to match logistics policy to military strategy leads to the consideration of the economic capacity of a country support those logistics policies. Here, again, the Confederates did a poor job of nursing the economic base on which their subsistence effort, logistics in general, and ultimately, military power,

depended. This was especially damaging to their cause, having chosen a military strategy that placed a premium on economic strength rather than immediate military power. Impressment, inadequate financial planning, and almost universal conscription, for example, all made immediate contributions to military strength, but at the cost of long-term economic viability. In the end, it was the near total collapse of the economic infrastructure, with all its attendant ramifications on productive ability and transportation capacity, that debilitated the subsistence effort.

3. The Confederate experience reinforces the awareness that military power can ultimately be dependent on strategic minerals. For the Confederacy, salt was a strategic mineral; the lack of which continually hampered efforts at maintaining adequate meat supplies for the army. Today, of course, strategists are aware of the importance of the rare metals used in our high-technology weapons. This represents no flash of insight, however; those metals are rare in peacetime as well as in a potential conflict. The Confederate ordeal reminds us that consideration of scarce resources must extend beyond the cutting edge of weapons technology, to the less glamorous, everyday materials on which our logistics capability rests. That this lesson remained unlearned as late as World War II is seen in the belated discovery by military planners that a shortage of

rubber for tires could compromise mobility and logistics operation as rapidly as lack of POL or enemy air strikes. The Confederate experience suggests that a comprehensive review of strategic logistics resources, similar to the GAO report on high-technology minerals issued in June of 1988, is necessary.

4. On a broader level, a study of Confederate subsistence logistics make it clear that logistics policy has to be managed from a single point of authority and responsibility, with power to coordinate logistics operation over the entire spectrum of military activity. The inability of the War Department to serve as that 'centre of unity,' as Northrop phrased it, led to wasteful squabbling between both logistics bureaus and combat commanders, and among the logistics bureaus themselves. Further, that single source of broad logistics policy must be incorporated in planning the strategic applications of military power. Exclusion of the Secretary of War from military planning caused poor logistics support of military operations, competition over transportation resources, and the loss of millions of pounds of subsistence stores in the wake of uncoordinated troop withdrawals.

5. If there is a single, large issue, that overrides all the foregoing discussion, it may be in recognizing, as the Confederates did not, that changing technological, political, and economic frontiers require a constant stretching of national priorities, policies, and strategies.

The Confederates approached the problems of their day with an essentially backward-looking orientation. They thought, organized, and planned on a state level, when the progress towards larger political economic and military interdependencies required an orientation at the national level. Possibly the fundamental lesson that the study of Confederate subsistence can teach us is that, having absorbed the lessons of the Civil War, and having organized, planned, and cooperated successfully on a national level for over a century, that the time for a reevaluation of our orientation has arrived.

Already, some argue that our industrial base has begun to erode, largely due to an insular, inwardly looking business orientation while economic initiative has shifted to the Far East. The shift to a multi-polar world; the incipient rise of an economically unified 'United States of Europe;' the decline of the Cold War and the growing integration on the communist states into the global economy; concern over international environmental issues; all these signify a greater commonality of interests on a larger scale than ever before. We can no longer plan on a merely national level; our interests are international in scope, and our military planning must reflect that fact.

Similar portents of an expanding political horizon were all around the Confederacy: the Industrial Revolution, the consolidation of national governments in Europe, large-scale

international trade, the almost universal abolition of slavery by 1860. Yet, the Confederates ignored those, and clung to their individualistic, states' rights orientation. This mindset prevented the coordinated management of the national logistics infrastructure, produced squabbling between governors and national authorities, and resulted in a fragmented and incomplete mobilization of the scarce resources of the Confederacy. The Confederates fought the first 'modern' war using a political orientation from the past, and their logistics effort suffered accordingly.

In NATO, we find ourselves in a situation very similar to that facing the Confederates in 1860. Substitute national patriotism for states' rights, the United States for the Trans-Mississippi Department, the Atlantic Ocean for the Mississippi, and the implications for logistics policy are clear. The United States, as in World War II, could find itself a remote, but critical element in a war fought on a global scale. Unlike World War II, however, contemporary economic and political restructuring since that war make it highly unlikely that the United States could again possess the economic and industrial capability to support such a conflict alone. As with the Confederate States, such a conflict would require the complete and efficient mobilization of the entire logistics resources of NATO. The logistics strategy, command and control, transportation, and strategic issues discussed above must be approached from an international, rather than national,

perspective. Weapons development, industrial capacity, mobilization of the civilian sector, manpower allocations, transportation networks, and all the other components that comprise logistics capability, require coordinated management at the international level for the most efficient and effective mobilization of the military unit's resources.

The Confederate experience shows that war can be waged, for four years, at least, in a collective manner by independent political units, each managing its own economy, supplying its own troops, and balancing military requirements with its individual motivations and concerns. The record goes on to show, however, that the logistics effort in such an arrangement will be severely degraded by uncoordinated action, incomplete mobilization of resources, and subordination of collective priorities to individual concerns. The inescapable result is a lessening of military effectiveness.

Appendix A. The Historiography
Of
Confederate Subsistence Logistics

Post-war criticism for the food shortages within the Confederate army has focused on the administration of the Subsistence Bureau by Lucius Northrop. In this Appendix, the development of the historical record with regard to the administration of the Subsistence Bureau will be briefly reviewed. In my opinion, the difficulties faced by the Subsistence Bureau have been ignored or overlooked by historians more concerned with the more 'glamorous' combat aspect of the Civil War than the logistics involved in supporting those combat operations.

There is no doubt that Northrop was a hard man to get along with; by the end of the war he had irritated every general with whom he had come in contact. Unfortunately for posterity, his abrasiveness did not stop with his death. Douglas Southall Freeman noted "He is, in fact, one of the few functionaries of the period whose letters, read after seventy years, irritate if they do not actually outrage the historian" (20:494). Even his own biographer has called him "a believer in red tape, dogmatic and uncompromising, cold and occasionally eccentric" (27:22). His personal unpopularity, his association with Davis, a personal feud with Lee, and the unquestioned failure of his Department combined to make him the ideal target for all Southerners searching for an excuse for Appomattox.

The standard opinion was set immediately after the war by Edward Pollard, the wartime editor of the Richmond Examiner and virulent Davis critic, in his analysis of the chronic food shortages of the Confederacy:

The fault was in Richmond; where a man flagrantly incompetent, appointed to the most important post in the country, on no other ground of selection than that many years ago he had been the college chum of the President, seemed busy for almost four years in bearing down all common sense and advice, practicing the most ridiculous quackeries, and stifling the very life of the Confederacy.
(41:476-477)

This initial evaluation continues in this vein for several pages, and is of such importance in setting the 'received opinion' of Northrop, his administration of the Subsistence Bureau, and the complete Subsistence problem that it has been included in its entirety as Appendix B. The train of thought set in motion by Pollard can be clearly traced through the years in such prominent historians as Douglas Southall Freeman, Bell Wiley, and Clifford Dowdey. Generally treating the entire subsistence effort in one or two paragraphs of generalities, the predictable conclusion was always that 'subsistence failed and Northrop was responsible.'

The influence of Pollard's reasoning may clearly be seen in Bell Wiley's analysis of the food shortages of the Confederacy. In his 1943 classic, The Life of Johnny Reb, all but three paragraphs of the 17-page chapter entitled

"Bad Beef and Corn Bread" are devoted to anecdotes retelling the suffering which food shortages had brought the army. His analysis of the administration of the subsistence effort was almost incidental, the sum total of which was that

The Subsistence Department was the worst administered of all Confederate Bureaus. L. B. Northrop, the head of the division, was a veritable "sour-puss" who, by his obstinate devotion to red tape, antagonized every general in the field, and who apparently took greater satisfaction in consistence than in delivering food to the army. (65:96-97)

He goes on to explain that lack of salt, inflation, and transportation woes contributed to the problem, but does not seem to think that they were insurmountable.

Dowdey, writing in 1955, continues the theme; he repeats the standard litany that Northrop was Davis' pet, a failure who should have resigned and spent his time in drawing up "legalistic bills of complaint." He concludes his one-paragraph analysis with "It was true enough that he was not alone to blame but, righteously devoted to his bureaucratic system, he preferred to explain where he was not at fault rather than to make any effort to produce." Dowdey knows better; his very next sentence begins a discussion of the railroad problems with "Against the railroads Northrop did have a good case," and he concludes his railroad analysis with "Without any central plan or directives, the inexperienced young men rushed busily about trying to justify their appointments, and succeeded in

creating a bedlam of divided and overlapping authority - to the disgust of the railroaders, the justification of Northrop, and the starvation of the armies" (15:186-187). Because Civil War research has focused overwhelmingly on the romantic combat side rather than the unexciting supply phase of the war, the initial simple generalizations of Edward Pollard and others like him, formed under the influence of abject defeat and bitter personal antagonism towards Northrop, have been simply repeated through the years in otherwise well documented scholarly works.

In the last thirty years historians have finally given the supply aspect of Civil War more scholarly attention, and Northrop has been somewhat rehabilitated. Complete treatments of the railroads, of agriculture, and of the Quartermaster and Ordnance Bureaus are now available. As study of the war has progressed beyond the combat activities, the fundamental logistics problems of the Confederacy are beginning to be considered more comprehensively. Emory Thomas and Frank Vandiver are representative of contemporary historians who have concluded that Northrop has been treated roughly by historians. Thomas Hay followed the by-now obligatory recitation of Northrop's personal idiosyncrasies with:

But when all is said, so far as the evidence shows, he was a good administrator who promulgated rules of procedure that were logical and that worked effectively - up to a point. That point was delivery of subsistence to the railroads. Here Northrop's control ceased until the place of

delivery was reached, where the state commissaries -as best they could - filled requisitions from armies in the field. Many of Northrop's troubles resulted from a multitude of matters over which he could exercise only a very general and tenuous control. Given the same severe limitations to managerial talent, it is not likely that any one else could have done much better. (27:22-23)

One of Northrop's last acts when he was removed from the office was to prepare a final report detailing the status of his Bureau. In addition to reviewing the situation at the time, he spends considerable effort in reviewing the activities of the Bureau while under his administration, and the obstacles he encountered in fulfilling his responsibilities. This final report is included in its entirety as Appendix C, and may be considered Northrop's reply to Pollard's criticisms (Appendix B).

The purpose of tracing the genealogy of historical thought as it regards the Subsistence Bureau is not to rehabilitate Northrop, but rather to show how the lack of any detailed analysis has obscured the real problems facing the Confederate supply authorities, and therefore, the Confederacy as a whole. It is this author's opinion that the failure of the Subsistence Bureau was not due to incompetence or mismanagement by Northrop, but rather to the Confederacy's almost complete disregard for the necessity of a complete mobilization of the logistics assets of the nation. This disregard manifested itself in the lack of any planned approach to logistics, the breakdown of the railroads, and ultimately, in the starvation of the armies.

Appendix B: Edward Pollard's Analysis of the
Breakdown of Confederate Subsistence Logistics

The following extract is representative of the prevailing view of the subsistence effort in the post-war period. Written by Edward Pollard, influential editor of the Richmond Examiner during the war, it was instrumental in setting the tone of historical inquiry for many years. Compare his analysis with the final report of Lucius Northrop for an alternative perspective on the subsistence problems of the Confederacy.

From: Southern History of the War (476-481)

We shall not go at large into the merits of this recrimination between the Confederate Congress and the executive. Each, undoubtedly, had its share of responsibility for the general improvidence and mismanagement that had fatally involved the fortunes of the Confederacy. But the maladministration in the War Department was even greater than Congress chose to indicate. From that department the confession had repeatedly gone forth, that two-thirds of our army were absentees; and yet nothing was done to enforce discipline or to punish desertions, and the morale of the Confederate Army was left entirely to the regulation of loose patriotic sentiment among those who composed it. No more forcible commentary can be made on the feeble execution of the military laws of the Confederacy, and the omission of the most ordinary discipline in the army, than to state the simple and indisputable fact that in the winter of 1864-5 Lee lost nearly half his army by desertions alone.

And that half was frequently in a condition bordering on starvation. There was really no lack of supplies in the country. It is needless to go into details, or to adduce statistics in proof of this. It is obvious to every well-informed mind. Although the occupation by the enemy, and his ruthless policy of destroying the harvests, granaries, and agricultural implements of the people, wherever he moved, had, undoubtedly, diminished the amount of cereals in the South, still, in view of the fact that in every State of

the Confederacy without exception, its agricultural labor had been devoted almost exclusively to the raising of breadstuffs (while before the war it was mainly devoted to the production of cotton, tobacco, and other exports, it was impossible to doubt that there was ample supply of food in the country.

The fault was in the Commissary Department at Richmond; where a man flagrantly incompetent, appointed to the most important post in the country, on no other ground of selection than that many years ago he had been the college chum of the President, seemed busy for almost four years in bearing down all common sense and advice, practicing the most ridiculous quackeries, and stifling the very life of the Confederacy.

It is a remarkable fact in history that many famous men who have prided themselves on their firmness and resolution in public affairs, and indeed have displayed these qualities to the generality of mankind, have yet been discovered to be under the dominion of the most paltry influences - in many instances governed by women, court-jesters, and the smallest of favorites. Such an apparent contradiction of character was to be found in President Davis. He could brace his mind and set his face against Congressmen and counselors generally. But he was absurdly uxorious; he was surrounded by adventurers and "confidence-men;" and some old West Point or Washington acquaintance might readily obtain his ear and favor when they were denied to the first men of the Confederacy.

Commissary Northrop, whose profession Mr. Foote declared in Congress had been that of a "pepper doctor," was one of the small favorites of President Davis. This old man was an extraordinary combination of ignorance and obstinacy; and it was remarked of him that such was his perversity, that whenever advice or suggestion was offered to him, he instantly and invariably took the precisely opposite course.

Richmond was now almost destitute of supplies, through the mismanagement and conceit of this man. His latest fancy had been to prohibit to the general public the importation of any supplies whatever into the Confederate capital. The farmer could not bring a bushel of corn or a pound of meat into Richmond without running the gauntlet of impressment agents. Permits to get flour into Richmond were valued at high figures, and obtained only through special favors. The consequences of Mr. Northrop's folly were, that large stocks of supplies were kept at home in different parts of the interior of Virginia; that they were thus exposed to Yankee devastation, and, in time, became an easy prey of the enemy's raids. It was through such mismanagement that the rich harvest of the Shenandoah were lost to the Confederacy. There had been ample time to have gathered into Richmond at least a large portion of these rich and accessible supplies. Numerous persons had gone to Commissary Northrop with the proposition to bring into Richmond grain and flour from the

Valley and were willing to make the condition that any part of their stocks would be given up to the Government, whenever there was any occasion for it to encroach upon the private storehouses of Richmond. But Mr. Northrop closed the door all such applications, and the commission houses and provision stores of Richmond were left almost empty; while the law of supply and demand was sending prices up far beyond the reach of the general customer.

HISTORY OF THE CONFEDERATE COMMISSARIAT

In the last Congress of the Confederate States, a secret commission was appointed to investigate the affairs of the Commissary Department. There was thus obtained within closed doors a mass of testimony which covered the whole history of the commissariat, and contains, indeed, subjects of the greatest interest in the war. This testimony was never permitted to see the light in the Confederacy; probably because it so deeply involved President Davis and his associates in the charge of maladministration.

It appeared before the secret commission that as early as the second year of the war, the meat supplies of the Confederacy were discovered to be largely deficient. This became evident enough on the successive captures of Forts Donelson and Henry. The subsequent campaign lost us Kentucky and much of Tennessee, and left us comparatively bare of meat.

At this time a number of proposition were made to the Richmond authorities, by responsible parties, to exchange through the enemy's lines meat for cotton. One man, whose ability to meet his engagements was never questioned, offered to deliver thirty thousand hogsheads of bacon through the lines in exchange for cotton. It was urged that there was enough cotton to feed and clothe our army, in a section tributary to Memphis -- which city was then, and had been for some time previous, in the secure possession of the enemy; that such cotton must otherwise probably be destroyed, to prevent its falling into the hands of the enemy; but that the owners as a general rule, though willing to let the Government have their crops, were averse, if not stubbornly opposed, to having them destroyed.

Against every proposition to get meat through the inland military lines, President Davis set his face as flint. He had got an idea into his head that the enemy's finances were about to collapse, and that if a little cotton might be kept from them they would be unable to pay the January interest of 1863. It appears, indeed, to have been impossible for him and his associates to rid themselves of their early conceit of the power of cotton; and it was this wretched delusion in hoarding this inert wealth of the South, that did more than any thing else to wreck the finances of the Confederacy, and eventuall, to reduce the

rations of its armies to one-quarter of a pound of meat a day per man.

The venality of the enemy afforded full opportunity to the Richmond authorities to use the Mississippi from Memphis to New Orleans, until all their needed supplies should be obtained. But no advantage was ever taken of this ample and obvious opportunity. The arguments used against trade in cotton through the lines were:

First--That the Federal finances were in such a condition that if they could not obtain cotton, upon which to draw bills wherewith to pay their then accruing interest, their credit would explode, and the war would speedily cease from the bankrupting of our assailants. Hence they wanted cotton.

Second--That they did not want cotton, but only sought under cover of a contract for supply, to find out the channels of navigable streams, to ascertain the location and condition of certain defenses, and otherwise to spy out the land.

Third--That the trade on the part of the Government would demoralize the people among whom it might be conducted.

Fourth--That to trade through New Orleans, and let cotton clear from that port, "would make Europe think we had caved, who thereupon would decline to recognize us, or to intervene."

The reader will recognize for himself the little value of these arguments - some of them childish - by the side of the great necessity of feeding the armies of the South.

The record of the narrow escapes of Lee's army alone from starvation, is sufficient commentary upon the management at Richmond. In consequence of the refusal to be allowed to purchase on the Mississippi, the army, especially in Virginia was put upon short rations. First, they were reduced to one-half pound of meat per day,--which, if it could have been kept up at that, would have been sufficient; then to one-third of a pound--though this allowance was not agreed to or adhered to by several of the generals commanding; and then to one-quarter of a pound. Upon this last allowance the Army of Northern Virginia wintered in 1864-5.

On the 18th of October, 1864, a memorandum was communicated to President Davis, showing that there were on hand in the Confederate States 4,105,048 rations of fresh meat, and 3,426,519 rations of bacon and pork, which would subsist three hundred thousand men twenty-five days. The authorities were now compelled to subsist, independent of the armies of the Confederacy, many thousand prisoners of war who were collected in different camps throughout the country.

In 1863 a feeble and badly organized attempt had been made to get meat from Europe through the blockade. Much of it was allowed to remain at Nassau and Bermuda until it

spoiled. Contracts for supplies, payable in cotton in our Atlantic ports, were made with several parties; but in no instance with success. Either the amount involved was too small to attempt the venality of those who could control or purchase an evasion of the blockade; or the engagement to deliver meat alone, was found to be too small an inducement to those engaged in blockade-running.

In the winter of 1864 the subsistence of the Confederate armies appeared to be in the last stages of exhaustion. Major Ruffin, assistant-commissary-general, testifies before a secret committee of Congress:

"On the 5th of December I brought the condition of things to the attention of the Secretary of War, coupling it with a statement of subsistence on hand, which showed nine days' ration on hand for General Lee's army; and, quoting his letter to the commissary-general, that day received, stating that his men were deserting on account of short rations, I urged prompt action; but none was taken. On the 14th of December, nine days afterwards, General Lee telegraphed Mr. Davis that his army was without meat."

In January, 1865, the following points were presented in secret session of Congress:

First--That there was not meat enough in the Southern Confederacy for the armies it had in the field.

Second--That there was not in Virginia either meat or bread enough for the armies within her limits.

Third--That the bread supply from other places depended absolutely upon the keeping open the railroad connections of the South.

Fourth--That the meat must be obtained from abroad through a seaport, and by a different system from that which has heretofore prevailed.

Fifth--That the bread could not be had by impressment, but must be paid for in the market rates.

Sixth--That the payment must be made in cash, which, so far, had not been furnished; and, if possible, in a better medium than treasury script.

Seventh--That the transportation was not adequate, from whatever cause, to meet the necessary demands of the service.

Eighth--That the supply of fresh meat to General Lee's army was precarious; and if the army fell back from Richmond and Petersburg, there was every probability that it would cease altogether.

Nothing was done by the Confederate Government commensurate with the necessities indicated above--nothing, in fact, done to meet them beyond a visionary scheme, enacted in the last days of Congress, to raise three millions in specie to purchase supplies from those producers of the Confederacy who were no longer willing to take scrip for their commodities. But few persons outside of the official circles in the Confederacy were acquainted with the true state of affairs; so hedged in with secrecy was the

weak and recluse government of Mr. Davis. To the well-informed and intelligent the appalling fact was manifest -- *that the whole system of Confederate defense was bound to break down by sheer mismanagement in the commissariat, even without a catastrophe of arms.* (41:476-481)

Appendix C: Report of Commissary General Northrop

When leaving office just prior to the end of the war, Northrop prepared this report to the Secretary summarizing the status of the Bureau, and reiterating his complaints about lack of support for his various proposals. When set in contrast to Pollard's observations in Appendix B, the reader has an opportunity to compare both sides of the bitter controversy.

Report of Commissary General Northrop as published in the Southern Historical Society Papers, 2: (July-Dec 1876)

CONFEDERATE STATES OF AMERICA
Subsistence Department
RICHMOND, February 9, 1865

HON. John C. Breckinridge, Secretary of War:

Sir-In response to your circular of 7th instant, received yesterday, I have the honor to submit, for your consideration, the papers herewith enclosed with the following remarks:

During the past fifteen months it has been my duty to make many and most urgent representation to the War Department of the danger of want impending over the troops of the Army of Northern Virginia, and also of the stringent necessity (for the safety of Richmond, of the State of Virginia, and probably of the Confederacy), that accumulations of supplies should be made in this city.

The obstacles in the way of this, and the plans to surmount those obstacles, have been pressed repeatedly, and the needed requirements urged. In my communications and endorsements to the Secretaries of War and the Treasury, and to others, I have fully set forth these difficulties, as indicated by circumstances, and urged, with pertinacity, the adoption of measures to overcome them. The arguments used by me have been, in my judgment, incontrovertible, but have had little effect, and the army of Virginia has for several

months suffered the consequence of their non-adoption, during which period it has been living literally "from hand to mouth." The other armies of the Confederacy have been differently circumstanced, and do not, for the present, so much suffer from local deficiency, or insufficient means of transportation.

During the WHOLE of the year 1864, consumption has been much more rapid than collection, and accumulations already made, instead of being increased, were consumed. During the first three months of that year a larger amount of money (in "old issue") was turned into the treasury by the officers of the commissariat than was issued by it to them in the new, and since that time only a part of what was due has been paid. As a consequence, their indebtedness has become overwhelming until everywhere credit was lost, and supplies, which might have been obtained for the subsistence of the army, passed into other hands. The same state of affairs, to even a greater extent, exists now in the period of collection, and, as a consequence of the lack of money and credit, not one-fifth of the hogs which could have been secured, have been or will be obtained for the army. Supplies which had been purchased at the islands to bridge over to the incoming crop of meat, have not been brought in, and are not now available. Repeated orders for their shipment were without effect, and plans proposed by this bureau to secure that object have not been permitted, or have been frustrated by circumstances beyond the control of the bureau.

The retention of many thousands of prisoners of war in this city caused the consumption of our reserve of flour, deficient transportation preventing their entire subsistence on corn from the South as had been intended.

The supply of the Army of Northern Virginia requires special consideration, for the ravages of the enemy in the country in which it operates, have left not a full supply even for the non-combatants. Hence its bases of supply are very remote, and that supply be contingent on the means of collecting in those remote localities an excess over the wants of the troops there operating.

This army is also sustained by various contrivances to draw supplies from beyond our lines by barter, and by secret arrangement, with the enemy turning on their anxiety to get cotton. For both these purposes funds and credit are both necessary, hence it is obvious that the subsistence of the army rests on a most precarious foundation.

The instant passage of the amendment to the TYTHE BILL, and its active execution, the exercise of authority to impress teams along the line of roads to bring supplies forward, the FURNISHING of SOME COIN, and sufficient funds to purchase articles of barter, and to pay for 4,000 bales of cotton IMMEDIATELY, and to purchase supplies throughout the land, are all indispensable at this juncture.

It is also necessary that the management of the Danville and Piedmont Railroad shall be rendered efficient, and that we shall hold the southwestern counties of Virginia, and those in North Carolina lying adjacent. In that section of country arrangements have been instituted by Major Shelby, to send forward supplies to this army. This is especially important since the loss of East Tennessee, where operations had been set on foot of a most promising character.

I make no suggestions here as to the alternation of impressment and uniformity of prices on the one hand, or, on the other, of taxation so heavy as to compel the sale of supplies and prevent hoarding either by agriculturists or dealers. I have, under existing laws, given my judgment on these points to the Secretaries of War and the Treasury heretofore. I suppose these matters are now well matured in the minds of those whose business it is to deal with them. I, however, present my circular of 5th September, 1864, which could not be made effective by me.

The arrangements and organization of this bureau are believed to be complete, at least I cannot devise any more effective to glean the whole country. I would here suggest that officers of the "tax in kind" be directed to report no district "impracticable" until after conference with the Chief Quartermaster and Chief Commissary of the State in which it lies.

The only substitute for the system of this bureau is the contract system, which is impracticable, when the only competition existing is one between buyers anxious to convert DEPRECIATING currency into APPRECIATING commodities. Moreover, contractors, having no certainty of sufficient transportation, or suitable employees, could not be relied on to fulfill their obligations.

This bureau system requires agents who are zealous, indefatigable, physically enduring, intelligent, acquainted with the laws and regulations of the bureau, and possessing tact. They must have a personal interest in doing well, such as the alternative of serving advantageously, or being conscribed. Cripples and feeble men cannot be made to work beyond what their feelings prompt, and exempts, with the requisite qualifications, can do much better for themselves in the employment of individuals, and, if they stay in the service, will not be controlled.

This bureau and its officers have been harassed, and their time (and that of the Secretary of War) consumed in vain in correspondence with the enrolling officers for necessary detailed employees, and in the consideration of applications of captains of companies for the return of their men so detailed.

If the chief of the bureau cannot be trusted to do all in his power to put men in the field consistently with his duty of feeding the army, then he had better be substituted by some one who can.

The ravages of the enemy destroying the fruits of the earth, the appliances for production and stock animals, persisted in by them in order to starve us, and to exclude us from all territory entered by them, is an impediment to subsistence, which I have (from their first experiment to test our endurance on this point) represented to be fatal, if permitted; but which can always be stopped by that side, when the necessity to check it becomes stronger than stimulus to the atrocity.

The worst feature of the condition here is the deficiency of bread stuff, which is due to the failure of the War Department to enforce firmly a suggestion often made by me, for two years past, to stop all travel and private freight, and continue that expedient until our supplies were forwarded.

This was promised by the Secretary in January, 1864, but not tried until March, when it was eminently successful. Had this been fully carried out, an accumulation of corn in Georgia, ready for shipment, could have been stored here. Repeatedly has this been urged in vain, until now, the connection being broken by Sherman, places that supply beyond our reach. From the beginning of the war this bureau has had a policy in reference to the main principles necessary to effect the objects for which it was created.

1st. It has limited the number of officers to its actual needs. As an officer of the Provisional Army holds his appointment only while his services are needed, this bureau has claimed that when an officer proved to be unsuitable, he should be declared "relieved from all duty," and thereby out of commission. In this way only can so vast and complex a machinery be managed with the same economy and advantage as the business of a private individual. When excess of officers has occurred, it has been occasioned by appointments made independently of it and assignments made without its knowledge.

2nd. As this war would be necessarily conducted on and along railroad lines, these should be harmonized and kept up to their highest point of efficiency and capacity of repairs in road-bed and rolling stock. I therefore proposed a plan and expedients for obtaining this end. This subject requires instant attention.

3d. I have always had (and urged) general principles respecting the rapid conversion of FUNDS into commodities, to the full extent of appropriation, the faster the better; and that funds should be furnished, if possible, irrespective of their apportionment in the ratio of time.

4th. A policy in respect to gathering stores from BEYOND OUR LINES, and from exposed outlying districts.

5th. I have always maintained trading in cotton with the enemy, or through the enemy's ports, and the necessity of promptly meeting our engagements in cotton, with the liberty to make such contracts as the bureau should think expedient, all based on the supposition of being furnished

with ample funds to procure the cotton needed.

Time, and repeated congressional investigations on several subjects) have, in every case, vindicated the policy of this bureau.

I therefore claim to be competent to speak with information well based and to affirm that, unless suitable men, unembarrassed by fears of removal (except for inefficiency), ample fund, and (for the present) COIN in sufficient quantity to keep the army of Virginia in beeves (which being at present driven from beyond our lines can be obtained by coin alone) are furnished, and the means of transportation from the South increased, this bureau cannot perform its functions.

And this brings me finally to the inquiry you make as to the ability of a chief of this bureau to effect the purposes for which it was created. I observe, then, that, in my judgment, it cannot be done except under an administration of the other branches of service (whose operations underlie those of this bureau) different from the past. The treasury must supply FUNDS AS NEEDED. TRANSPORTATION must be found, both wagon and rail. Over neither of these subjects can this bureau exercise any control except by application to the treasury for the ONE, and to the Quartermaster Department for the OTHER. This latter has its own supplies of forage to gather, and, as controlling transportation, its officers naturally serve that department first, especially in wagon transportation for hauling in from the country.

The Secretary of War must be a centre of unity to all the subordinate branches of his department. Had this been effectively acted on, it is probable that the supplies of this bureau now at the islands would have been brought in.

Without the appliances to buy, fabricate and transport, necessary results cannot be achieved, and where those appliances are not furnished in a measure commensurate with requirements the ESSENTIALS of food must be FIRST sought. And when the means to procure even these are not adequately supplied, then the distribution of that which is procurable must be proportionately restricted.

I illustrate by stating that the adherence of this bureau (under the embarrassments referred to) to the reduction of the meat ration, notwithstanding the urgent application of General Lee, has alone enabled it to furnish meat thus far. And, foreseeing the inevitable deficiency ahead, I asked the Secretary eight months ago to put the bread ration at one pound. He refused, and I did it ON MY OWN responsibility. This continued for some months, and General Lee at length urgently applied for increase. The Secretary of War also pressed it. I refused unless positively ordered in the face of my declaration that it was absolutely necessary to keep it at that point, without due funds and improved transportation from the South. On 14th December, I recommended the reduction by general order, and

he then reluctantly assented. Without this proceeding on my part, this army would absolutely have been destitute. I mention this fact to exhibit the straits to which this bureau was driven, under the embarrassments referred to above.

Very respectfully,
Your obedient servant,
(Signed) L.B. Northrop,
Commissary-General
(40:86-90)

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Captain Benjamin M. Washburn was born on 23 February, 1956, in Wilmington, North Carolina. He graduated from high school in Richmond, Virginia, in 1974, and attended the University of North Carolina, from which he received the degree of Bachelor of Science in Business Administration, on 13 May 1979. On 9 April 1982, he received a commission in the USAF through Officers Training School. He entered into active duty the same month at Mather Air Force Base as a student in Undergraduate Navigator Training. After graduating from UNT and completing advanced navigator training at Castle Air Force Base, he was assigned to Pease Air Force Base as a Mission Navigator, later an Instructor Navigator, and finally an Evaluator Navigator in the 509 BMW Stan/Eval section. He entered the AFIT/School of Systems and Logistics in May 1988.

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SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

Form Approved
OMB No 0704-0188

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S) AFIT/GLM/LSR/89S-69			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION SCHOOL OF SYSTEMS AND LOGISTICS		6b. OFFICE SYMBOL (If applicable) AFIT/LSM		7a. NAME OF MONITORING ORGANIZATION	
6c. ADDRESS (City, State, and ZIP Code) AIR FORCE INSTITUTE OF TECHNOLOGY WRIGHT-PATTERSON AFB, OH 45433-6583			7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING/SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State, and ZIP Code)			10. SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
			WORK UNIT ACCESSION NO.		
11. TITLE (Include Security Classification) AN ANALYSIS OF CONFEDERATE SUBSISTENCE LOGISTICS					
12. PERSONAL AUTHOR(S) Benjamin M. Washburn IV, B.S., Captain, USAF					
13a. TYPE OF REPORT MS Thesis		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) 1989 September	
15. PAGE COUNT 195					
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	SUBSISTENCE, CONFEDERATE STATES OF AMERICA, CIVIL WAR, LOGISTICS		
05	06				
19. ABSTRACT (Continue on reverse if necessary and identify by block number) Thesis Advisor: Freda Stohrer, PhD Associate Professor of Technical Communication Approved for public release: IAW AFR 190-1. <i>Larry W. Emmelhainz</i> LARRY W. EMMELHAINZ, Lt Col, USAF 11 Oct 89 Director of Research and Consultation Air Force Institute of Technology (AU) Wright-Patterson AFB OH 45433-6583					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL Dr. Freda Stohrer			22b. TELEPHONE (Include Area Code) (513) 255-2820		22c. OFFICE SYMBOL AFIT/LSR

UNCLASSIFIED

AFIT/GLM/LSR/89S-69

ABSTRACT

The purpose of this study was to examine the policies and procedures devised by the Confederate States of America to provision its armed forces. In using the historical experience of the Confederates in logistics management, it was felt that fresh insight could be given to logistics problems of the present.

The method was essentially an inductive one. The specific procedures used by the Confederates, and the success or failure in which those procedures resulted, were examined to find their roots in pervasive principles of logistics management that are still valid today.

The Confederate experience was divided into three main areas in accordance with the United States Air Force definition of logistics. Those areas were 1) the production of food supplies, 2) the transportation system of the Confederacy, and 3) administrative procedures, both national and within the Subsistence Bureau, used to coordinate subsistence activities. It was found that the Confederates were able to produce adequate food supplies during the war, but that national coordination was lacking and the transportation system was incapable of handling distribution requirements of the size generated in the Civil War.

Many of the factors that mitigated against Confederate success in coordinating the subsistence effort remain valid today. Recognition of logistics requirements, a single integrated approach to logistics needs, and a dependable transportation infrastructure are fundamental to effective logistics management.

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